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Clinical Lectures.

NUCLEAR OPHTHALMOPLEGIA IN THE COURSE OF TABES.

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A CLINICAL LECTURE DELIVERED AT THE HÔPITAL NECKER.

Gentlemen:—I will to-day refer to you a patient who must have certainly attracted your attention on going through the wards, owing to his curious aspect and the characteristic appearance of his face. In fact, this man is suffering from a double ptosis; his eyes are tightly closed; he cannot open them, and so marked is the condition, that it has been necessary to apply a suitable bandage in order to keep elevated the upper eye-lids, without which appliance they inevitably fall. This paralysis stands by itself, so to speak, since the integrity of the other peri-orbital muscles is almost absolute; the movements of the eye-brows, those of the frontal, of the orbicularis palpebrarum, as well as of the other muscles of facial expression, are perfectly normal.

If you raise his eye-lids, you will immediately discover that on both sides, that is, on the right as well as on the left, the eye-ball is directed outwardly: in other words, there is a marked divergent strabismus. It is absolutely impossible for the patient to put the eye-ball in a normal position; there is a complete paralysis of the internal rectus. The upward and downward movements are likewise impossible to execute; nay, I commit an error in thus expressing myself, for the latter movement can still be made, its amplitude, however, being greatly diminished; and if you make a close examination you will see that it is accompanied with a certain amount of rotation of the eye-ball; this is effected by the intermediary action of the superior oblique. In one word, only the muscles supplied by the oculo-motor nerve are paralyzed, but (and this is an exceedingly important point) this nerve is not completely affected, since the size of the *pupil remains perfectly normal.* Contrary to what is seen in cases of ptosis, accompanied with external strabismus, there is no mydriasis. The iris is not paralyzed; it contracts perfectly to light, and you will observe that the pupillary orifice contracts or dilates according as an object is placed near or far from it. Add to this, finally, that the visual acuteness is normal, more so on the right side; on the left (where the ptosis is older) it seems that it is not entirely so.

If we are to investigate the cause of these symptoms, we will find that our patient has a most interesting history. His health had been good up to 1887; he had previously suffered, in 1865, from intermittent fever, and in 1868 contracted syphilis. He was afterwards, at Lyons, treated during 3 months for the perfectly characterized secondary symptoms of the constitutional disorder. After this he did not complain of any illness for a period of 20 years, and he thought that his syphilis had been entirely cured, which, I will repeat, was only treated during 3 months. The patient became afterwards subject to periodical cephalalgias and a slight trouble of the kidneys.

On the month of July, 1887, he went to South America, and there was obliged to make long rides on horseback. One day he was violently thrown from his horse, and when he returned to consciousness was told by his comrades that his left eye-ball was directed outwardly, and from that moment he continued to suffer from diplopia, which, as you see, had a sudden onset. At this time he was obliged to wear a bandage over the injured eye in

order to correct his diplopia, his vision being then confined to one eye.

There were, at the same time, other symptoms apparently foreign, so to speak, to the orbicular trouble: difficult micturition, at first slow and then a little painful; gastric derangement, and localized sweatings on the inferior extremities, accompanied with a pruriginous eruption over the plants of both feet.

Two months later, in February 1888, there appeared a progressive falling of the eye-lids, these being kept up only by means of the fingers. The patient could perceive also that the deviation of the eyes was on the increase; that the left eye-ball had already turned outwardly completely, and that the right one had commenced to exhibit a similar phenomenon. After this, he was not, strickly speaking, troubled with diplopia, but he had now lost binocular vision, and to-day the images perceived by him have an inclined form. Vision was only distinct in one eye, but at this time there had not appeared any ptosis of the right side.

This condition remained stationary during a period of 4 years, his general health continuing good, with the exception of occasional vertigos which he would experience especially when subjected to sudden drafts of air. He never suffered from dizziness nor from loss of consciousness. Fortunately for him, the ptosis of the left side completely destroyed the vision of one eye; by this he could see distinctly with the other eye; and he was thus enabled to continue at his trade which was that of a peddler. On the 29th of February, however, a change for the worst occurred. The patient, on attempting to bring down an object situated at a certain height, raised his head suddenly; and he was then attacked by vertigo, falling to the ground unconscious. He remained in this condition for 2 hours; when consciousness was regained he complained of severe pains all over the head, the back of the neck and the orbital region; the right eye-lid fell, and it became impossible for him to raise it now.

It was under these conditions that the patient sought our advice. Here is, then, an individual who has been attacked in succession (and every time in a rapid manner) by a double ptosis and paralysis of the movements of the eye-ball, movements which are under the influence of the oculo-motor nerve. It remains for us now to determine what is the lesion that has produced these various symptoms.

It is hardly possible to believe in that a cerebral, peduncular or pontine hæmorrhage has been the origin of such accidents. In a case of this nature we would observe upon our patient the existence of motor and sensory troubles; following the hæmorrhage or the congestion, there would appear a hemiplegia accompanying the ptosis, and afterwards a double hemiplegia if the lesion were extensive enough to affect both cerebral peduncles. The symptoms can be dated to 4 years ago; a hæmorrhage that old, capable of bringing about such disorders, would be followed, as is the rule, by a descending sclerosis characterized by contraction.

The hypothesis concerning a cerebral tumor affecting from the start the origin of one of the oculo-motor nerves, then that of the opposite side, deserves to be discussed with a great deal of care. This tumor might have lied upon two distinct points. Supposing it to have developed over the inter-peduncular region, on the level of the superior border of the pons; it could readily be understood how, provided it had acquired a sufficiently large size, such a tumor would press on the origin of the third pair. In such a case, however, we would have resulting motor phenomena, and partial tingling of the facial nerve, but nothing of the kind is observed in our patient.

Shall we admit, as in a case reported by Christ (*Deutsch. arch. f. Klin. Mediz.* B. XLVI, s. 497), the development of a tumor on the floor of the fourth ventricle, pressing on the nuclei of origin of the oculo-motor nerve, which are situated, as you know, not far from it? Under this hypothesis, the initial symptoms are identical with those we have observed in our patient; but their evolution is somewhat different. There may be produced, indeed, and quite rapidly, a progressive invasion of the motor centres of the face and neck, there coming on, in a few days, a labio-glosso-laryngeal paralysis, accompanied with ocular trouble, optic neuritis, etc.

Is it a syphilitic gumma with which we are dealing? Bearing in mind that our patient has, with a certainty, suffered from syphilis, this latter opinion may be entertained; but if we attempt to localize the

gumma, we come across certain difficulties, difficulties which we have pointed out in regard to tumors of the pons.

We can, nevertheless, solely by the analysis of the symptoms, come to the conclusion that we are dealing with a lesion affecting the floor of the fourth ventricle. Indeed, the dissociation of the present paralytic phenomena, the integrity of the pupil, contrasting with the ptosis and the paralysis of the ocular muscles supplied by the oculo-motor nerve, all this would incline us to admit the existence, not of a lesion of the nerve, but of *an alteration of its nuclei.*

You remember the beautiful researches of Hensen and Voelkers (*Archiv. f. Ophthalmol.* Bd. XXIV, S 1–26) regarding the origin of the third pair; you know that the nerve arises in isolated cells or in groups of cells, situated at the superior portion of the floor of the fourth ventricle, along the aqueduct of Sylvius. The fibres for the muscles have their origin in the nuclei alongside of the aqueduct; those for the iris, arise more externally, from the lateral portions of the floor. You will understand then, how lesions (the nature of which I have not yet established) of those groups of cells nearest the aqueduct of Sylvius, can produce motor phenomena of the eye-lids and of the eye-ball, without at all affecting the pupil. Is not this what is observed in our patient? The paralysis of the extrinsic muscles under control of the oculo-motor nerve, permits us to say that it is not due to a neuritis or to pressure upon the nerve; in this latter instance we would have a total paralysis. In the case under consideration, on the contrary, the dissociation of paralytic phenomena is the best proof that the lesion is of a centric origin, and that the lesion affects, although not all of them, the cells of origin of the oculo-motor fibres.

What is then the disorder capable of producing such symptoms? Are we dealing in the present instance with *superior acute poliencephalitis*, a good description of which has been furnished us by Wernicke (*Archive f. Psychiatrie*, 1889)? This is a disease as yet imperfectly known, characterized by a rapid destruction of the motor centres of the eye. Following the rapid invasion of an ophthalmoplegia there appear, in a very short time, symptoms of staggering, muscular rigidity and phychical disorders resembling those of a *delirium tremens.* This disease is ordinarily developed under the influence of alcoholism, in a rapid manner, and has a sudden termination in the course of from three to four weeks, or else death is preceded by symptoms of a labio-glosso-laryngeal paralysis. From an anatomical point of view, this disorder may be absolutely likened to an acute myelitis of the anterior horns. Now, in our case the development of the affection, which has been slow (it has lasted four years), and the absence of other medullary symptoms suffice for us to exclude the diagnosis just referred to.

Progressive atrophy of the medullary nuclei or centres may give rise to similar symptoms. This malady, whose process is the same as that of progressive muscular atrophy of the cord is quite rare; but I can cite two well marked examples of it. One of these cases is that reported by Bemhardt (*Berl. Klin. Woch.*, October, 1890): An individual, after an attack of nuclear ophthalmoplegia, exhibited symptoms of labio-glosso-laryngeal paralysis, and died suddenly; he did not show a single sign that would lead one to suspect the presence of tabes. The other case recorded by Wherry (Paragensia with ophthalmoplegia, *British Med. Jour.*, May, 1891) occurred in a man who after a sudden attack in which he did not suffer from loss of consciousness, complained of a bitter taste in the mouth, and then of diplopia, progressive ophthalmoplegia with deviation of the two eye-balls. A knowledge of the previous history of the case, led the author to admit the existence of a syphilitic lesion of the centres of the third pair, situated in the neighborhood of the aqueduct of Sylvius; such was corroborated by the fact that a complete cure was obtained after a course of an iodated treatment.

This observation presents a marked analogy with our case; yet I do not believe that we can accept a diagnosis of this kind. It is the presence of *tabes* to which we must attribute the eye-symptoms exhibited by our patient. Indeed, we have before us a tabetic patient, and I will show you that such is the case, by bringing to your consideration certain details concerning the pathological history of this individual, details to which I have not, purposely, directed your attention before. After the first symptoms of ocular paralysis, in 1888 and 1889, the patient suffered from sharp pains in the lower extremities,

which at first, were only occasional, but always of a lancinating character, peculiar to them; at the same time, the patient complained of a feeling of constriction over the thorax and in the head, and of sensory disturbances over the region of the trigeminal, such as numbness of the lips, loss of buccal and palatine sensibility. Micturition became difficult and laborious, notwithstanding that there was no stricture of the urethra. Finally, at the beginning of 1891, his walking became bad, and he assures us that his heels were particularly weak and had a tendency to draw towards one another.

After the last attack, which was accompanied with loss of consciousness, the symptoms became more pronounced. The patient could not stand erect, except when, by artificial means, he could keep one of his eyes open. The signs of Rombert and Westphal are now plain, and there are sensory disturbances, and especially marked, a spot of hypersthesia on the right thigh.

Here, therefore, the diagnosis is evident. We are dealing with a case of *tabes*, which manifested itself at first, by an ophthalmoplegia whose character, during four years, has been essentially progressive. I will, however, call your attention to the fact, that this tabes has exhibited a marked peculiarity, and the predominence of the medullary phenomena, the total absence of a special localization, of trophic or articular disturbances, distinguish it from other varieties of tabes with which we frequently meet.

The existence of oculo-motor paralysis in the course of locomotor ataxia, is not, moreover, absolutely rare. After the first works of Hutchinson, in 1879, a certain number of observations have been published. I will recall to your minds the quite recent cases reported by Pel (*Berl. Klin. Woch.*, 1890), Ziem (Ein fall von doppelscitiger ophtalmoplegie. *Centralbt. für. hervheilhunde*, 1887), Blanc (L'Ophtalmoplegie nucleaire, *Archiv. general. de med.*, 1887), and Dejerine who last year exhibited three patients whose condition was identical to the one that has been the object of this lesson. Ophthalmoplegia does not always present the same characters; it may be complete, the iris becoming implicated; the muscles of the eye-ball may be affected, while the elevator of the lid remains intact. From a clinical point of view, it is important to make a distinction between two great groups of ophthalmoplegia which affects all the extrinsic muscles of the eye-ball, and internal ophthalmoplegia in which only the iris becomes implicated. The onset of the disorders is generally sudden, that is, that of the paralysis the appearance of which indicates a permanent trouble, as well as that of simple functional disturbances that generally get well in a few weeks (Wherry). We must not forget, however, that relapses in these latter instances are not rare. We frequently meet with tabetic patients who show signs of ophthalmoplegia at more or less prolonged intervals.

How can we explain this phenomenon? It seems that an identical explanation cannot be given in every case. If, as is often the case, the ophthalmoplegia is due to centric lesion affecting primarily the nuclear origin of the oculo-motor nerves, completely destroying the nerve cells, it may also result from a primary alteration of the nerve trunks, from a neuritis of the oculo-motor nerves. This seems to me the most probable explanation that we can offer in cases of curable ophthalmoplegia. Neuritis of this nature comes on, most frequently, after an attack of an infectious disease during which, as you know, the poison has a marked tendency to localize itself upon the nervous system. In one of my last lectures I had occasion to show you a case of double neuritis as a sequela of influenza, and I then called your attention to the relative benignity of such neuritis, corroborated by the fact that in the case, a woman, sight was completely recovered soon afterwards.

In tabes, as I have said, slight cures of cases of ophthalmoplegia have been observed (Pel). Is this a sufficient reason to completely exclude, in such instances, a lesion of the centres, and to attribute the symptoms noticed to a neuritis? I, myself, do not believe in such a hypothesis, and it seems to me that up to the present time, it lacks evidence.

Dejerine believes that in order to establish a diagnosis between the centric and the peripheral origin of the symptoms observed, the fact of curability should, above all, be taken into consideration. Such an opinion, however, is absolutely free from criticism. Again, nothing will hinder us from admitting that a cell alteration, sufficiently marked to produce paralysis, is not susceptible of cure (s

complete cure), as in the case of a similar lesion of the nerve trunks. Finally, the dissociation of the paralytic phenomena is, to my mind, a capital proof in favor of their centric or nuclear origin.

What produces this alteration in the cells? It is more than probable that the symptoms are due to an acute congestion analogous to that which causes the lancinating pains; this hypothesis is in accord with the other inflammatory phenomena which accompany the ophthalmoplegia of tabetic patients: cephalagia, vertigo, pain in the back of the neck, and in the eye; it explains, in one word, the ordinarily sudden onset of the symptoms. This congestion, if persistent or repeated may, later, give rise to the progressive development of an ependymal sclerosis, comparable to that of the posterior spinal nerves, which may destroy the motor centres. These inflammatory outbreaks, occuring in the course of tabes, resemble very much those which you have seen come on in the course of general paralysis which has moreover, many other analogies with tabes; besides, it is not absolutely exceptional to see tabetic patients exhibiting cerebral disorders, such as difficulty of speech, vertigo, loss of consciousness, symptoms all which are similar to those occurring in general paralytics. We have at present, in one of our wards, a beautiful example of a similar association of symptoms which cannot be explained, I think except by the existence of a congestion of the brain.

On the other hand also, these circulatory disturbances of tabes may be traced to a vascular change, thus, Berger (*Bull. mens. Soc. Biolog.*, March, 1889) has reported a tabetic case in which he found the existence of an obliterating endoarteritis of the medullary vessels, which explained the symptoms observed. Finally, it is through the vascular alterations produced, that syphilis became the genesis of a large number of cases of locomotor ataxia.

In the present case the prognosis of ophthalmoplegia, in seems to me, is exceedingly serious; the symptoms are of too long standing to hope that they will retrocede. I believe that in our patient the paralysis will be permanent; in him the condition is incurable. On the contrary, it does not seem to me that the intregity of the sight is so seriously threatened. It is true that atrophy of the optic nerve comes on soon in the parataxic period of tabes or in the slow ataxias, but almost never does it coincide with the appearance of the ophthalmoplegia.

The greatest gravity of the prognosis is the danger of the medullary symptoms. If you admit that the phenomena observed in our patient are of a centric origin, and if, on the other hand, you will not forget that the oculo-motor nuclei are the neighbors of the circulatory and respiratory centres, you can readily understand how a more or less pronounced congestive process may bring about the production of serious symptoms, and even sudden death, as I have had the opportunity to observe in one case. Our patient has some difficulty of deglutition, which seems to show that the circulatory disturbances are not limited to the motor centres of the eye, but that they have a tendency to spread over the inferior portion of the fourth ventricle. The occurrence of such a development ought not to surprise us in the ordinarily rapid march of a medullary atavia.

I think that we are authorized in this case to give syphilis the preference, regarding the ætiology of the symptoms present; the onset of these, to a certain point, furnishes us the proof of our assertion. Indeed, the researches of Fournier has shown that 43 per cent. of tabetic cases occurring in syphilitic patients, begin at the brain, and the author concludes by saying that the cerebro-medullary form of tabes is observed especiallly in those syphilitic subjects in whose personal or hereditary previous history, moreover, it has not been possible to find a sufficient reason to explain that especial localization.

In spite of the probable syphilitic origin of this tabetic case, I do not believe that the specific treatment can produce an amelioration of the symptoms. Again, it is unfortunately the rule, in the majority of tabetic cases in which syphilis has been recognized as the cause, to find that the specific treatment is nearly always useless. Nevertheless, as this is the only rational medication to employ in such instances, I will not deprive our patient of it. I will, therefore, place him for a time under an active antisyphilitic treatment, such as mercurial inunctions and iodide of potassium internally in doses of from four to six grammes daily. I will also order revulsion and sulphur baths; but I will not

apply to the temples or the eye-lids, continuous or interrupted currents, because I believe that in cases of this nature electricity does more harm than good.—Translated from *Le Bulletin Medical*, No. 22, 1892.

PROGRESSIVE MUSCULAR ATROPHY; HEADACHE FROM EYE-STRAIN; HYSTERICAL VOMITING.

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Gentlemen:—You have already seen this patient once before so that it is not necessary for me to go into details of his case. From the general aspect of the right forearm you will see that he has progressive muscular atrophy. He is a boiler-maker by occupation. When I presented him to you before, I told you that the affection had come on very slowly; that there had been first a loss of grip, then atrophy, fibrillary contractions and vaso motor disturbance, such as sweating. Progressive muscular atrophy of this kind is due to degenerative process in the anterior horns of the spinal cord; it was formerly called, an *inflammation* but it is a progressive necrotic process, and not an inflammation. The plan of treatment which has been adopted, consists in injections of gr. ½. of nitrate of strychnia daily, and it is my usual practice to give it alternately in the affected part, and in the back of the neck. It is given hypodermically, because experience has shown that in a certain proportion of the cases, the muscular atrophy is arrested by this treatment, and it seems reasonable to suppose that when a drug is administered subcutaneously, it "rushes" upon the nervous centres, so to speak, and exerts a more powerful effect upon them, than when it is slowly absorbed from the stomach into the circulatory system, and so gradually reaches the nervous centres. I frequently also prescribe phosphorus and arsenic, as in the following formula:

℞ Potassii arsenit.....gr. j.
Thomson's solution of phosphorus....oz. iv.
Misce. Sig.—One teaspoonful, gradually increased to a tablespoonful, t. i. d.

In addition to this, these patients should have the best of food, and an abundance of fresh air, and a moderate amount of electricity and massage. In progressive muscular atrophy, there is a temptation to yield to the solicitations of the patient, and do too much. You should pick out each muscle and electrify it with the faradic current, not more than six times at each seance, and massage should be carried out in the same careful way. Three times a week is usually sufficient, and I frequently alternate the electricity and massage.

The other day I saw a most pitiful case—a man who had been brought to this city from a western town. He had enjoyed excellent health up to four years ago, but at this time, his feet began to get weak, he noticed a steady wasting away of his muscles. About one year after this, the left leg began to be affected in the same way; first, the toe dropped, then the foot turned outward a little, then the calf began to waste, and after about a year and a half, he was unable to walk at all, and his two lower limbs were pefectly helpless. We then found that when sitting in a chair, if he leaned forward, he could not resume his former position, and if he leaned over backward, he would fall; in other words, the muscles of the abdomen, and the erector spinæ muscles had become weakened. The arms were the next to become affected. He had during this time, consulted a number of physicians, and some of them had been much puzzled over his case, but all expressed the opinion that his condition was incurable. As a last resort, he came to this city, a physical wreck, although his mind still remained keen. After careful electrical and other examinations, I made a positive diagnosis of chronic poliomyelitis of a progressive character, a condition which bears a very close relation to progressive muscular atrophy. The anterior horn cells in this man's spinal cord four years ago began to degenerate; first the right leg, then the left leg groups, then those of the back became affected, until now there is scarcely any gray matter in the anterior horns. So great have been the ravages of the disease, that now the prognosis is almost hopeless. I expect that there will next be some difficulty in speech or deglutition, or that he will have a respiratory paralysis from involvement of the phrenic nerve.

We are taught that progressive muscular atrophy is a hopelessly progressive disease, but this is not true, for there are certain types in which the progress of the

disease can be staid. One observer reports a series of eleven cases in which the atrophy was checked in eighty per cent. of the cases of hypodermic injections of nitrate of strychnia. I believe in the utility of these injections, and I think in addition to this, the "rest cure" should be prescribed, and the patient given stimulants and abundance of good food, particularly fatty food.

HEADACHE FROM EYE-STRAIN.

This next patient is a plumber by occupation, and he comes to us with the familiar story of a pain in the head. He does not smoke, drink, or chew, so that we cannot attribute his trouble to such vices. These pains first began about three months ago, and they are usually located in the temples, although sometimes they are felt in the top of the head. They do not always begin at the same time in the day, and they are attended by a certain degree of mental confusion, but without nausea or vomiting, or dizziness. He is not anæmic or dyspeptic. So far as I had time to test his vision, it is fairly good. The case evidently is one well calculated to bring out important points in connection with the general ætiology of headaches. I think you will all admit that we can exclude most of the *reflex* headaches. The *vascular* headaches are those which we find in anæmia and chlorosis, and uræmia, or associated with what are known as the rheumatic, gouty, and diabetic diatheses; in other words, where the headache is the result of a toxic condition of the blood from the development of a poison within the system. There is no such condition present in this patient; nor is there any history of hysteria or neurasthenia, so that we can exclude those headaches which are classified as *neurotic*. The *toxic* headaches are those due to alcohol, nicotine, lead, syphilis, etc. He has no symptoms of lead poisoning, and the history is distinctly negative as regards the others. Finally, there is the headache of the organic disease —tumor, catarrh and diseases of the frontal sinuses, etc. I think we can exclude all these in his case. I have gone over these causes of headaches systematically in order to show you how helpful to diagnosis such a method of examination becomes, if put into practice habitually.

Let us consider more in detail for a moment the condition known as *migraine*. Migraine usually begins before the age of nineteen and twenty years, and is most commonly one-sided, and accompanied by some nausea, and paroxysms ordinarily occuring with more regularity than they do in this man. I consider that his headache is due to eye-strain, and I propose to have his eyes carefully examined by our colleague in ophthalmology. If the trouble with his eyes proves to be slight, I would not prescribe eyeglasses for him until I had first determined what could be done by toning up the system in general, for, many people with marked errors of refraction will go through life without much annoyance until they become run down in health or neurasthenic, when they will become aware of the existence of this defect in their vision, and in such cases, measures directed to the general condition, will cause a rapid improvement in the local trouble. A rough and ready method which is often of service in the office for ascertaining the existence of insufficiency of the internal recti consists in covering up one eye of the patient, and directing him to look fixedly at a pencil which you hold before the eyes and gradually approach to the face. When it is brought near to the eyes, you quickly uncover the eye, and if there be such an insufficiency, you will notice that both eyes do not converge upon the pencil, but look in different directions. This you see is the condition in the patient before us.

HYSTERICAL VOMITING.

This young lady has been suffering for three years from a very distressing malady. She is fifteen years old, and has been in good health before this illness began. About three years ago, she began to vomit almost all food immediately after it was taken. This was not accompanied by nausea or any particular distress. She has been subjected to various kinds of treatment, up to the present time without benefit. She tells me however that when she is away on a visit, or goes to a new place to work, she is not troubled with it for a while. These facts are very instructive as they throw much light on the cause of her trouble. She has apparently dyspepsia; the tongue is clean and moist, the bowels move regularly, and contain digested fæces, notwithstanding that she tells us that she throws up "all her food." It is evident that she does not throw up as

brain, stomach, or kidneys, and we are therefore driven to the opinion, which is borne out by the history, that the case is one of hysterical vomiting, and I am glad to be able to show her to you as it is a very typical example of this condition. I always like to test such cases for the subjective evidences of hysteria. In the severer forms of hysteria you will always find the "stigmata" of this condition. They consists of disturbances of the special senses, such as concentric limitation of the visual field, loss of color sense, limitation of the range of hearing, divergence of the sense of smell and taste, anæsthesias of the hands and legs. These anæsthesias were formerly thought to be always distributed on one side of the body alone, but this is exceptional. They are usually distributed over the hand and forearm, and over the foot and leg very much like a glove or stocking. When present, these stigmata are extremely valuable as showing the nature of the disease. This young lady, strange to say, did not have these when I first examined her, but she did have what we often find in American women, a general sensitiveness of the whole body, and an abnormal acuteness of all her special senses. I presume her stomach shares in this hypersensitiveness. We conclude, then, that the general diagnosis of this case is hysteria, and the special diagnosis, is hysterical vomiting, or a neurosis of the gastric nerve.

I cannot give you the exact physiological mechanism of this process, because I have not watched this person in one of her attacks. In some of these cases, the food is not all swallowed, but some is retained in the lower portion of the œsophagus, in a sort of second stomach, and is afterwards regurgitated, instead of being really vomited. This is an old and strongly rooted habit in this lady, and some heroic therapeutic measure will be required. The surest way would be to take her away from home and put her in an institution where she would be under strict supervision. Then, the use of cold baths and the administration internally of two or three grains of the valerianate of zinc, three times a day, would be indicated. It might even be necessary to have her stomach washed out. I think she would also be amenable to hypnotism, but I have not sufficiently tested her as yet as to this point. A very simple way of testing patients remuch food as she would have us believe. We find no evidence of any disease of the garding their susceptibility to hypnotism is to place a thimble, such as is used in banjo playing upon the patient's finger with a mysterious air, and then direct her to watch the finger intently for about fifteen minutes to see what will happen. If the patient perceives a numbness in the finger, the test indicates that she is a good subject for hypnotism, but if on the contrary, she laughs at the idea of watching the thimble, and evinces much skepticism as to the probable result of the test, it will be well for you to abandon all thought of trying to treat her by this method.

PYREXIA IN URÆMIA.

Richardiére and Thèrèse (*Rev. de Mèd.*, December 10, 1891) say that pyrexia not only does not exclude uræmia, but may permit its recognition and even prevention. It does not depend on the symptom-complex nor on the nature of the renal lesion. In the uræmia of acute Bright's disease one is tempted to explain the temperature by the local inflammation; yet it is uncommon to see uncomplicated acute nephritis with any marked rise of temperature. Uræmia, whether in the form of convulsions, coma, or delirium, may be attended with pyrexia, and therefore the temperature in uræmic eclampsia is not to be attributed to the increased muscular movements. No cases are recorded of uræmia with pyrexia when the symptoms have been referrable to the alimentary canal or respiratory system. The course of the temperature is in relation with the intoxication. It rises with the premonitory symptoms, attains its maximum with the attack, and falls when the uræmia symptoms improve or disappear. The pyrexia has no special prognostic significance. Once the temperature becomes normal the attack may be considered over. The cause of the pyrexia lies in the uræmia as it is seen apart from visceral complications. Cerebral œdema was noted in some fatal cases. Two substances have been found in the urine, one of which, when injected into animals, produces a rise of temperature (Binet), the other a fall of temperature (Bouchard), and the authors think that in the auto-intoxication of uræmia there is or is not fever, according as the one or other predominates.—*Brit. Med. Jour.*

Communications.

THE TREATMENT OF ACUTE ARTICULAR RHEUMATISM: A CLINICAL AND STATISTICAL STUDY OF EIGHTY-FOUR CASES WITH A CONFIRMATORY PLEA FOR THE SALICYL-ALKALINE TREATMENT.*

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In a mental debate as to the contents of this paper with special reference to the therapeutics of acute articular rheumatism, the author was forcibly reminded of a truism expressed even so long ago as 1837 by an author in his introduction to a book described is an October number of the *Botanico-Medical-Recorder*, in which introduction he said: "The old school materia medica will be critically examined, it will be shown that the remedial agents are not to be depended upon, and that no two authors who have written upon the subject precisely agree as to the effects which many of them produce. The discrepancies of medical authors from Hippocrates down to the present time will be accurately detailed."

In the light of the advancement of the nineteenth century, and that of all preceding years, an impartial critic must even now write in a similar strain.

It is easier now than then to characterize discrepancies, but it is often as difficult to establish our own preferments by well-conceived and scientific conclusions.

Pathological anatomy through macroscopical and microscopical methods has demonstrated the various nucleolar and protoplasmic changes, and denominated the many orders of schizomycetes to the almost satisfaction of investigators. For that we honor it, as well as for the new therapeutic means which these investigations have suggested, resulting in the cure of diseases hitherto considered incurable; but even pathological anatomy, while it has now nearly reached its limit, has as yet failed to define satisfactorily some of the commonest of maladies, notably acute articular rheumatism.

Medical scientists are daily growing more averse to the consideration of any drug or drugs in a given disease, the therapeutic action of which in that particular disease cannot be thoroughly explained, and yet who can deny that in the treatment of syphilis in its several stages, we have specifics in mercury and the iodides.

In the absence of light as to the ætiological factor producing syphilis, if scientific, it would not be humane to refuse to use those drugs which are known clinically to have great value.

That acute articular rheumatism is due to the entrance of some morbific principle into the blood, is very generally conceded, but investigations in the direction of its nature have hitherto been futile; the pathological changes produced by that agent are well understood, but throw little light upon its prime factor.

Of the many theories advocated, the one attributing it to a specific organism seems very plausible, although as yet the agent has not been demonstrated.

That it is due to the retention in the blood of some excreted or changed substance, and that substance uric acid or some modification of it seems highly probable from many points in the natural history of the disease; but whatever the agent, the above two theories can either of them be strengthened by clinical testimony of the good effects of the preparations of salicylic acid—known enemies to many forms of bacteria—and of the neutralizing alkalies.

One of the most difficult features in the clinical history of the disease to overcome, in the consideration of treatment, is the tendency of the disease to involve the heart, the serous and synovial membranes; but the most peculiar of all, in the matter of its relations to the blood, is the fact that it produces its ravages through the medium of arterial and capillary blood, almost totally ignoring the nervous system.

Why an agent so very effective in the production of organic valvular lesions should involve one side of the heart to the almost absolute exclusion of the other is a

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puzzling query, and one which must be satisfactorily answered before the true pathological character of the disease can be determined.

Can it be that in passing from the right side of the heart through the pulmonary circulation to the left side, this so-called morbific principle is increased in virulency; or is it probable that the arterial blood in passing through the systemic circulation is filtered, so to speak, of most if not all of this foreign virus; or after all is it of such a nature that it is destroyed or held in abeyance by the CO_2 of the venous blood, to be removed or set at liberty again by the oxygen of the air?

These are interesting and vital questions and must be answered before any logical deductions can be drawn relative to its true nature; answered before any treatment can be declared divested of empiricism, for as shall be shown later on in this article, of the 84 cases considered not one of them developed a lesion referred to the right heart.

Such lesions have been reported, but they must be exceedingly rare, and to require worthy notice must be proven to have developed under observation.

The writer does not deny the possibility. These few introductory remarks have been made by way of provoking discussion in order to arrive at some definite explanation of the good effects derived from the treatment of acute articular rheumatism, by the salicyl-alkaline remedies, and not with an attempt to introduce all of the many theories offered to explain its pathological character, for to do the latter would involve much time and prove of no practical value.

It may be added here, however, that while the theory of its uric acid cause seems to the author's mind to meet a number of demands than any other. He is not prepared to adopt it since experiments which he has made, and is now engaged in making, as the examination of the blood in health and disease, and the examination of serum drawn through the medium of an epispastic, etc., do not warrant him as yet in forming any conclusions; furthermore, such a discussion can scarcely come within the limits of this paper.

The conclusions which he has drawn from a study of the cases are based upon clinical evidences only.

Pari passu with the speculation as to the origin of acute articular rheumatism, has gone one after the other, rising and falling with popular favor and dissent, a host of drugs and remedial measures.

Mention of most of them he shall sedulously avoid, nor shall he discuss the merits of that treatment which sought at one time to prove that acute articular rheumatism is a limited disease demanding only palliative treatment, and little of that; one-half of the proposition is admitted and believed, but to one who has seen a helpless individual suffering torture equal almost to the the darkest days of the Inquisition, within the short space of a few hours relieved, if not entirely freed from pain by the judicious use of the salicylates and the alkalies as the basis of treatment, palliative treatment, only, seems short of criminal, nor will the free use of anodynes alone absolve the conscience.

The object of this paper being to bring into special prominence the treatment mentioned above, from a clinical standpoint, no attempt will be made to introduce any other routine other than the mention of certain drugs and methods which act as adjuvants.

The author does not see proper to make any such distinction as dividing cases into plethoric and anæmic, believing that all cases, provided they present themselves during the acute inflammatory stage, should be similarly treated, each case best suggesting subsequent remedies; neither does he think it necessary to divide them into acute, subacute and chronic since in the first place the present subject deals mainly with the former, and again his convictions lead me to believe that the joint inflammation is not a fair index of the ravages being produced by the circulating poison upon other tissue.

Granting a case presents itself with acute articular rheumatism for the first time, what should be done with it?

Occurring as it usually does in young adults, consider carefully the patient's habits, his manner of life, his occupation, his attention to sexual and general hygiene, etc., all of these things aiding far in subsequent treatment, and in advice towards warding off succeeding attacks.

In most cases it is advisable to give a cathartic as early as possible, the bowels usually being constipated.

An excellent combination is calomel gr. ¼, triturated with potassic-bicarb. grs. V, given every hour for eight doses, to be followed one hour after the last dose by one half ounce of rochelle salts, the latter repeated if necessary.

The above combination is useful for the following reasons: (a) Calomel in such doses is not only mildly cathartic but somewhat diaphoretic, and decidedly diuretic—each action in itself serviceable.

(b) The potass. bicarb., according to well recognized ideas, promotes the effect of the calomel, and additionally acts to aid in reducing the hyper-acidity of the fluids of the body.

The rochelle salts for obvious reasons, is decidedly indicated and should, in the writer's judgment, be used rather freely during the subsequent course of the disease.

So much for the preliminary treatment, if it can be called such; but even before the above has been carried out entirely, not interfering in any way with it, the administration of the alkalies and salicylates should be initiated.

Of the alkalies perhaps as good a one as any is the ordinary sodii. bicarb., given in sixty grain doses every four hours and repeated during the night if urgency demands it.

As to the choice of the salicylates there is much difference of opinion, unequivocally the writer prefers the sodii-salicylat. for several reasons: It is very soluble in water, is easily administered, is not so irritating as some others, and if it is true, as it is supposed, that the acid is itself converted into a basic salt and that salt sodii-salicylat., then rational therapeutics would call for the use of the latter.

Salicylic acid is preferred by some, the objection to it is its slight degree of solubility in water, unless in combination with a neutral salt, the borate of sodium adding to its solubility. An additional objection is the gastric irritation produced in some cases. It is not absorbed so readily as sodii-salicylat.

Salicin is perhaps less easily absorbed than either of the above, as observed by tests of the urine, saliva, etc. Clinically it is not nearly so reliable. The same may be said of salol.

In the treatment of the cases included in this study, several of them were put upon salicin and salol (as their histories will show) for the first three or four days, and their temperature noted.

Slight influence on either temperature or pain was observed. The cases were then put upon sodii salicylat., and marked changes noted.

This alone would not be conclusive evidence, since one might say that the disease had already run its course, had not many tests of the sodii-salicylat. from the beginning of the disease proved clearly that they were not mere coincidences.

The very fact mentioned here is also conclusive toward proving that the good effect of the combined treatment is not due to the alkali alone, as some have attempted to prove; if it were so then salicin plus an alkali would be, *caeteris paribus*, as effective as sodii salicylat. plus an alkali.

Many of the failures with the salicylates have been occasioned possibly—provided the cases were properly selected—by the injudicious use of the drug, in some cases giving too much, in others not sufficient. Few cases require more than 10 grains every two hours, and few require less. It has been the rule of the writer to give 10 grains, repeated every two hours during the night as well as during the day, as long as the acute stage lasts; and in a hospital like Bellevue Hospital, where the greater number of these cases were treated, the orders were very rigidly carried out.

In some cases it is advisable not to administer the night doses, but in many for the first three or four days it is safer, and by safer is meant in order to prevent or assist in controlling cardiac complications, for as shall be shown later on of thirty-six cases seen on an average of 6.02 days after the onset of the attack, only one developed any cardiac complication during treatment, ond that one developed pericarditis within ten hours after treatment was begun. Possibly the pericardial inflammation had existed even several hours before it was recognized.

This gives practically a perfect result, showing that before a certain date during the progress of the disease,- in these cases an average of 6.02 days, if the patient can be saturated with the remedies, the danger of cardiac complications is much lessened.

The percentage of such complications as generally reported under a mixed treatment, is variously estimated, in endocar-

dial inflammations it is to put at from ½ of 1 per cent.—9 per cent.; in pericardial, it is placed at about 15 per cent. These figures, however, the writer believes do not represent the true number of cardiac complications, for every apparent murmur heard over the heart does not necessarily imply endocarditis, and on the other hand murmurs often exist indicating actual endocarditis, but are not recognized.

Perhaps some of the murmurs reported to have been heard over the right heart could have been shown to have other than a direct connection with the inflammatory process.

At times it may be found necessary to give fifteen grains of the sodii salicylate every two hours instead of ten.

One of the cases reported, a young girl of ten years, took fifteen grains every two hours for eight days, the treatment being repeated at night as well as during the day; at no time did she complain of gastric irritation, nor did she suffer from any disturbance of cerebration such a case, however, is very exceptional.

To *prevent* the *unpleasant effects of sodii sal.* upon the central nervous system, potass. bromide, in about ten grain doses, may be found serviceable.

Another important part of the treatment is to *promote diaphoresis* and the use of hot pack, or of a warm bath night and morning, provided the patient can submit to the moving, will be found very beneficial.

The bath is best used as the acute symptoms are subsiding but not at all if serious cardiac complications exist, unless the steam bath be employed, as 'tis advisable not to move the patient if avoidable. Heat thus used is very grateful and diminishes any existing pruritus; in some way it modifies the tendency to skin eruptions, which exists in a small per-centage of cases.

Dilute nitro-muriatic acid added to the bath affords comfort.

To *control the pain* constitutionally ʒii of the U. S., sol. morph. sulph. internally, or Mvj or vij of Majendie's solution hypodermatically should be administered in all cases where much suffering exists.

Locally over the inflamed joints a lotion containing ammonium chloride acts excellently, afterwards wrapping the parts in flannel.

Heat or cold as seems most grateful might be used. Gentle massage often affords great relief.

For *diet* milk only, and continued for several days after the acute symptoms have subsided. The treatment of complications is not called for here.

During convalescence tonics are indicated, and the tr. ferri chlor. is one of the best for reasons connected with its physiological action.

If for any reason the sodii salicylate can not be borne, then the other salicyl-derivatives should be tried.

The oil of gaultheria containing about 90 per cent. of methyl salicylate may be found serviceable. Very few stomachs, however, will refuse the above treatment if the drugs are fresh and judiciously employed.

To meet any extraordinary indications the ingenuity of the attendant will offer suggestions.

The author does not and can not claim any originality for the principles laid down, and these remarks but preface a summary of cases treated on a basis fortunately widely recognized.

Again, he does not claim to have treated every case strictly on these principles, as some cases showing a tendency to chronicity were given potass. iodid., tr. guaiaci. ammonia, etc., with benefit. Cases combining that variety of phenomena and classified as rheumatic gout were given special treatment additionally, and where apparently they did not belong to the present summary were left out altogether.

The conclusions deduced were drawn from bedside observations, and after repeated examinations.

Following is the summary, the author refraining from reading each individual case.

AGE.—Average age of all cases considered,					29.88
Average age of all cases first attacked,					28.50
Oldest first attacked was in a female,					65 years.
Youngest " " " "				9	"
Next youngest first attack (two cases),				15	"
Between the age of	15	and including	20,	16	cases.
" "	20	"	30,	39	"
" "	30	"	40,	18	"
" "	40	"	50,	7	"
" "	50	"	60,	2	"
" "	60	"	65,	2	"
Between the ages of	15	and including	25,	33	"
" "	25	"	35,	31	"
" "	35	"	45,	11	"
" "	45	"	55,	6	"
" "	55	"	65,	3	"

Least number for any decade, between

55 and 65, 3 cases. The first ten years of life not considered, as cases under fifteen years of age did not come under the writer's notice in hospital practice.

Greatest number for any decade, between 20 and 30, 39 cases.

Next greatest number for any decade, between 15 and 25, 33 cases.

Next greatest number for any decade, between 25 and 35, 31 cases.

The number between 15 and 35, 64 or 76.19 per cent. of all cases. The number before 30 years, 54 or 64.28 per cent. of all cases. The number before 40 years, 73 or 86.90 per cent. of all cases.

SEX.—Number of females considered, . . 20
Number of males considered, . . . 64

COLOR.—Number of whites considered, . . 83
Number of negroes considered, . . 1

RACE.—

United States,	27	Hungary,	2
Ireland,	22	France,	1
Germany,	10	Scotland,	1
England,	6	Sweden,	1
Italy,	4	Newfoundland,	1
Russia,	4	Canada,	1
Austria,	4		

OCCUPATION.

LABORERS, including drivers, carpenters, peddlers, messengers, butchers, painters, gas-workers and plumbers, 47, 55.95 per cent.

DOMESTIC, including waiters, laundresses, housekeepers, cooks, 22, 26.19 per cent.

The remaining number including clerks, barbers, tailors, etc., 15, 17.85 per cent.

FAMILY HISTORY.—Acute articular rheumatism had occurred in last generation in 9 cases, 10.74 per cent.

PREVIOUS ATTACKS.—Previous attacks had occurred in 31 cases, 36.90 per cent.

PRESENT ATTACK—Extremity involved. Began in lower extremity in 64 cases, . 76.19 per cent.
Began in upper extremity in 20 cases, 23.80 "
Confined to lower " 27 " 32.14 "
" upper " 9 " 10.71 "
Extend to both extremities in 48 " 57.14 "

PRESENT ATTACK—JOINT INVOLVED.

Found in one knee, other joints involved, in . .	27 cases,	26.10 per cent.
Found in both knees, other joints involved, in . .	71 "	84.52 "
Found in both knees only in	6 "	7.14 "
Found in one knee only in	1 "	. . .
Found in one ankle, other joints involved, . .	10 "	11.90 "
Found in both ankles, other joints involved, . .	53 "	63.09 "
Found in both ankles only,	1 "	. . .
Found in hip or hips, other joints not considered in .	11 cases,	13.09 per cent.
Found in shoulder or shoulders, other joints not considered in	32 "	38.00 "
Found in elbow or elbows, other joints not considered in	23 "	27.38 "
Found in wrist or wrists, other joints not considered in	25 "	29.76 "
Found in metacarpus and phalanges, other joints not considered in	6 "	7.14 "
Found in metatarsus and phalanges, other joints not considered in	2 "	2.38 "
Found in temporo-maxillary, other joints not considered in	1 "	

DURATION BEFORE AND AFTER TREATMENT.

Average number days of duration before treatment	9.10.	
Average number days of duration after treatment,	16.80.	
Total number days to dismissal of case	25.90.	
Average number days of duration before treatment in first attack	6.39.	(53 cases.)
Average number days of duration after treatment in first attack	16.40.	(53 ")
Total number days to dismissal of case, in first attack	22.79.	

COMPLICATIONS.

Number of cases in which old cardiac complications existed	17.	20.15 per cent.
Number of cases in which recent cardiac complications existed	24.	28.57 "
Number of cases in which recent and old cardiac complications existed . .	36.	42.85 "

Average number of days of duration before treatment of recent cardiac complications, 14.2.
Average number of days of duration after treatment of recent cardiac complications, 17.3.
Total number of days of duration to dismissal of case . . . . . 31.5.

Average number of days of duration before treatment of *no* R. C. C.	7.2.	(60 cases.)
Average number of days of duration after treatment of no R. C. C.	17.2.	(60 ")
Total number of days to dismissal of case	24.4.	(60 ")
Average number of days of duration before treatment of no R. nor O. C. C. . .	6.02.	(36 ")
Average number of days of duration after treatment of no R. nor O. C. C. . .	14.30.	(36 ")
Average number of days to dismissal of case	20.32.	(36 ")
Total number of cases indicating endocarditis	22.	
Number of cases marked *slight systolic apex* murmur	8.	
Total number of cases indicating pericarditis	5.	
Ratio of pericardial to endocardial . . .	1 : 4.25.	
Left side of heart involved in	23 cases.	
Right side of heart involved in, . . .	no "	

Acute *pleuritis* complicating in 4 cases (1-21).
Acute *lobar pneumonia* complicating in 1 case (1-84).

Suppurative endocarditis and suppurative myocarditis, 1 case.

TEMPERATURE.

Average tempt. on first day seen, . . .	101.6
Average pulse rate on first day seen, . .	93.7
Highest tempt. on any day, ...	104.0
Highest pulse rate on any day, ...	131.0

RESULT.

Of the total cases, ...	No. 84
Died, ...	3
Improved, dismissed or passed out of notice, .	8
Cured, ...	73

Of the 36 cases with an average duration before treatment of 6.02 days only one developed any cardiac complication as has been mentioned above.

Of the remaining 48 cases, 21 had developed heart complication, which in no case could be attributed to purely functional causes in either the present attack or supervening upon an old trouble, similarly acquired.

Of these 21 cases one did not yield to the specified treatment, but continued to develop attacks at rather frequent periods for the next fifteen months while under observation. In this case, however, the patient did not bear the drugs well, not being able to take but very small doses, and those for only a short period; and when it is remembered that this case, then only fifteen years of age, had been suffering from annual attacks ever since nine years old, and at the time of observation presented a marked murmur of mitral insufficiency, our faith on account of this failure should not wane.

Of the 8 cases noted "Improved" one had been sick three weeks and had suffered from A. A. rheumatism before. Another had been sick 9 weeks.

Another had been sick 29 days. Another, the case of the girl 15 years old (other treatment used). The remaining four were treated with other additional drugs on account of the salicylates not being well borne.

Of the three cases noted "Died," one, although seen before the fifth day of sickness, had already developed acute ulcerative endocarditis, and on the second day of observation a profuse petechial eruption on arms, legs and back.

Singularly this patient lived nine days longer or nearly sixteen from onset of attack.

Autopsy revealed suppurative endo-, peri- and myo-carditis. Both apices of lungs presented old tuberculous nodules with pleuritic adhesions. A small suppurative foci in spleen and liver.

The 2nd case, when first seen had been sick one month. Had suffered from A. A. rheum. two years before and presented at time of observation a marked murmur of mitral insufficiency. Patient lived thirty-one (31)days longer. Autopsy revealed acute pericarditis, acute double pleuritis, and acute lobar pneumonia. The patient, a female, was forty-eight (48) years old with an alcoholic history. The 3rd case, a man, aged 60 years, had suffered from A. A. rheum. several times before. Presented on examination which was made twenty-one days after onset of attack, marked mitral regurgitation and mitral presystolic murmurs. Lived six days longer. Autopsy revealed acute double pleuritis with effusion and rather recent endocarditis engrafted upon old valvular trouble.

From the foregoing study the writer has felt constrained to draw the following brief conclusions:—

(1) That acute articular rheumatism is a specific disease due to some morbific principle or infectious agent circulating in the blood.

(2) That whatever that principle or agent, the salicylates tend to either destroy it or prevent any further formation.

(3)That in substantiation of some acid factor as a cause, though possibly only as a complication, the author noted a constant acid condition of the urine, and a neutral or acid state of the saliva in 80 per cent. of the cases examined.

(4) That the disease is self-limited with a tendency to recovery within a variable period.

(5) That while self-limited, cases are very prone to develop cardiac complications as in direct proportion to the polyarthritis, this is not the invariable rule—having many notable exceptions. The same thing may be said regarding the constitutional phenomena.

(7) That under the salicyl-alkaline treatment these or other complications are either absolutely prevented, in the vast majority of cases, or their severity mitigated.

(8) That drugs to reduce the heart's action, thereby lessening the tendency to valvular complications by relieving the valves of extra amount of work thrown upon them, are seldom indicated, the salicylates sufficiently controlling.

(9) That acute articular rheumatism is a disease likely to develop again in those once attacked, and that with each subseqent attack the tendency to cardiac complications increases.

(10) That this tendency to recurrence seems to the writer to disclaim rather than to substantiate the theory of its infectious nature.

(11) That the writer does not believe the statement that the salicylates render subsequent attacks more probable, since

of the thirty-one (31) cases of recurrent acute articular rheumatism recorded, but very few of them could give a history of having taken similar treatment before; furthermore such a proposition can not be based upon any plausible hypothesis.

(12) That the above mentioned treatment shortens the duration of the attack particularly the very acute stage, relieving pain often within a few hours from the time of saturation.

(13) That the period of saturation is variable, depending upon the amount of the drug that can be borne by the individual.

As the salicylates appear in the saliva and urine often within twenty minutes after administration, and the physiological phenomena manifest themselves within six hours, it is fair to assume that by the time the patient has taken four or five doses of fifteen (15) grains each, the condition of saturation is approximated, and within twelve to twenty-four hours attained.

(14) That while the duration of cases reported seems as long as or longer than the average cases under other treatment, the time computed represents a supposed absolute freedom from any further rheumatic influence, many of the cases appearing well several days before discharge.

(15) That from the observation of the above and other cases, the writer is led to believe that the treatment should be continued, three or four days at least, after all objective and subjective symptoms have disappeared, for since the poison may circulate in the blood for a variable time, producing endocarditis, even before any definite articular symptoms appear, in like manner may it continue for several days after cessation of these symptoms.

(16) That if this fact, if it be a fact, were more generally recognized, fewer cases of so-called relapse from salicyl-alkaline treatment would be reported.

(17) That if all cases could be put upon the above treatment at least within six days after first symptoms have manifested themselves, the subsequent course of the disease would be mitigated, and serious complications often prevented.

(18) Deductions with reference to influence of occupation, etc., as ætiological factors are mentioned under tabulated statistics. The same may be said of frequency of extremities and joints involved, etc.

THE CIRCULATION IN THE BRAIN AND EYE WITH INCREASED PRESSURE AND GLAUCOMA.

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Circulatory disturbances in the brain and eye with regard to increased intra-cranial and intra-ocular pressure have many points of resemblance.

They are respectively enclosed within a firm capsule of an unchangeable capacity. Both organs are subject to pressure as a result of the circulation of the nutritive juices. In both instances this pressure, when it goes beyond physiological variations, affects the optic nerve, producing a papillitis "choked disk," or, an excavation of the optic nerve.

The functions of the brain and eye depend on a normal circulation in most delicate structures, hence, the inflow and outflow must be balanced and any brief obstruction may give rise to a serious disorder.

Another resemblance we see pathologically where increased pressure in both organs is the most frequent result of atheromatous degenerations or inflammatory changes of the vessel walls with their consequences.

The brain while filling the cranial cavity has many external communications through the entrance and exit of the blood-vessels, lymphatics and nerves, but they fill out their foramina completely. The spinal cavity is capable of a change in volume as the membrane obturatoria atlantis posterior and anterior, the ligamenta flava and the sheaths of the intervertebral foramina are capable of distension.

If the subarachnoidal spaces of the spinal cord are injected with a colored solution, this extends quickly over the surface of the brain, passes through the foramen Magendie into the fourth ventricle so on until finally it fills the central canal of the spinal cord (*Key. Retzius, Althan*). It is suggested that the subarachnoidal spaces communicate with the

lymphatic vessels of the brain and pia mater, that the latter unite at the entrances of the arteries at the base of the brain and pass down as the plexus jugularis interna.

In the arterial system of the brain there is a positive pressure which propels the blood while the outflowing circulation is under a negative pressure in the veins. Still another factor is found in the ventricles and lymph spaces which contain the cerebro-spinal fluid. If the brain is so compressed that pressure is exerted upon the ventricles there will be increased pressure of the csp. fluid in all the spaces, and the ligaments of the spine bulge outwards. Experiments do not show that increased tension of the csp. fluid compresses the brain and renders it anæmic. Anatomists are not certain whether the csp. fluid stands in communication with the lymphatic vessels.

Adamkiewitz says experimenters who inject saline solutions into the spaces filled with csp. fluid do not compress the brain by increased tension, but from the irritation produced by the experiment, and, according to the same authority, neither experiments nor clinical experience have furnished sufficient supporting evidence to construct a theory of compression of the brain.

It is generally accepted that the brain pulsates, that the csp. fluid flows to and from the spinal into the cranial cavity, that there is a systolic and respiratory movement, and finally, Cramer claims that the veins of the brain pulsate. This phenomenon is explained in the following manner. In heart systole the mass of blood receives an additional amount and the tension of the csp. fluid is increased. As the blood pressure diminishes gradually from the arteries to the capillaries and so on to the veins, the veins are that part of the vascular system in which there is least pressure and consequently the one which can be compressed with the greatest ease, The increase in pressure being rhythmical. the compression of the veins is rhythmical—remittent, and they must show pulsation.

When in passive hyperæmia the outflow of venous blood from the cranial cavity is obstructed, the arterial supply will naturally meet with an obstruction. When the contractile condition of the vessel wall is lost a part of the blood pressure is transmitted to the csp. fluid.

When then the tension in the cerebro-spinal cavity can no further accommodate itself by distension of the spinal ligaments, arterial hyperæmia compresses the capillaries of the brain.

Hyperæmia and anæmia would thus appear to disturb the nutrition of the brain in the same manner and lead to similar disturbances of function. Knoll claims to have observed the cranial arteries after a temporary anæmia when refilled with blood under a certain pressure, to relax and produce hyperæmia.

Cramer says in experiments which raise the blood pressure in the aortic system the cerebro-spinal pressure is augmented and an increased outflow of venous blood, the result. Pressure in the brain is then transmitted from the blood to the csp fluid on to the dura.

The blood-vessels of the brain with their perivascular spaces, the ganglion cells with pericellular spaces, with large spaces containing the csp. fluid, the structure of this organ protects its more delicate tissues trom the variations of physiological pressure.

One of the most prominent symptoms of intra-cranial pressure is "choked disk."

Descending neuritis is observed in diseases of the cortex, in diffuse maladies, principally acute and chronic meningitis and hydrocephalus. Choked disk is most frequently seen in tumors of the brain. The gradual growth of a tumor demanding more and more space, displaces the cerebro-spinal fluid, and also fills with fluid the spaces between the sheaths of the optic nerve which stand in communication with the lymph spaces between the cerebral membranes—hydrops vagina nervi optici—Schmidt, Mauz.

This accumulation of fluid brings about a stasis of the lymph in the optic nerve itself, especially in the lamina cribrosa. The œdema of the lamina cribrosa causes a compression of the central vessels and as the diminished caliber of the central vein fails to return the blood, we get a venous stagnation and swelling of the optic nerve. At the scleral ring we may have even an incarceration or strangulation followed by a high degree of œdema.

Ophthalmoscopically, in choked disk the swelling is considerable but stops suddenly at the margin of the papilla; sometimes we notice a hyperæmia of the retinal veins.

In neuritis descendens the papillary swelling is small while the exudation causes a discoloration of the disk and extends into the retina giving us the picture of a neuro-retinitis.

These two forms of neuritis cannot be strictly differentiated, as they pass frequently one into the other.

The eye, for purposes of study, can also be considered inclosed in a capsule containing fluid. The contents of this capsule exert a pressure upon its inner surface, which, according to hydrostatic laws is transmitted with equal force upon every part, and the lamina cribrosa as its weakest point shows the earliest sign of an augmented tension. The crystalline lens is held in position by the zonula zinii forming a diaphragm, which divides the inner contents of the eye ball and under normal conditions is elastic and may be pushed either way. Augmented tension with the zonula zinii drawn tense, etc., as frequently happens, pressure may vary in the aqueous from the vitreous humor. This does take place when the aqueous humor escapes and the lens is pushed forward, the difference in pressure of the vitreous increase filtration and refills the anterior chamber. Deutschman argues that repeated paracentesis causes an increased metabolism of the vitreous, an observation which might be of use in the treatment of its diseases. The contents of the eye ball with a variable volume are the aqueous and vitreous humors but it is principally the blood which by increase or decrease in blood pressure in the inner coats of the eye may cause a corresponding change in intra-ocular pressure. Under physiological conditions there are small variations. Temporary influences which raise the pressure in the entire vascular system are balanced by an increased outflow of fluids from the eye.

Glaucoma is a disease characterized principally by increased intra-ocular tension, by the excavation of the optic disk and the disturbance of vision consequent upon these morbid changes. Augumented tension and an excavated disk without a previous disease to account for them, is called primary glaucoma, when another intra-ocular disease is present, secondary glaucoma.

Primary or real glaucoma generally affects both eyes, even if not at the same time, while secondary glaucoma is limited to the eye which gave rise to it.

Among the many theories advanced to account for the increased intra-ocular pressure in glaucoma those of Grafes Doudens, Stellevog, Knies and Weber are the most important but they fail to give a suitable explanation for all cases. The theory of Weber refers increased tension to an obstructed excretion, retaining an increase of fluids within the eye. At present this theory has the largest number of adherents.

As the chief factor in the development of the glaucomatous process we must regard the senile degeneration and dilatation of the uveal vessels, a condition found in nearly all cases by pathological anatomy. These vascular changes in the capillaries, principally of the interior portion of the uveal tract, produce a chronic increase in the volume of the blood, causing a slight transudation and increased escape of fluids and plastic elements into the anterior half of the bulbus. Consequently we have an increase intra-ocular pressure with its consequences. In this manner we obtain a typical glaucoma. But augmented tension as in attacks of severe iritis, for instance, and glaucoma, are by no means identical conditions. A correct diagnosis of glaucoma is of the greatest importance as an early therapeutic interference may save the sight of the patient. To enable us to do this we must take into view a number of conditions. We cannot rest the diagnosis of glaucoma upon a single symptom.

Attacks of hemicrania with gastro-febrile symptoms should warn the physician to look for the possibility of a glaucoma and make a thorough examination of the eye. After these symptoms we may have an increased tension of the eyeball, loss of corneal sensibility, enlarged pupils, diminished accommodation and a shallow anterior chamber. The optic media become cloudy.

Inflammatory glaucoma may be mistaken for iritis or iridocyclites and a treatment with atropia can do great harm. The frequent indiscriminate instillation of atropine, or even homatropine and cocaine in eye diseases, cannot be too strongly discouraged, especially in elderly people. To differentiate between an inflammatory glaucoma with ciliary injection, a discolored iris, and iritis, leaving augmented tension aside, in iritis we have a contracted pupil, in glaucoma it is dilated.

Atropine should only be used when directly indicated and stopped when the desired effect is obtained. Simple glaucoma without any inflammatory signs may be diagnosed for a beginning cataract when no ophthalmoscopic examination is made.

When increased intra-ocular tension is found as a complication of another pre-existing disease, it is termed secondary glaucoma, and here we can observe the characteristic consequences of a primary glaucoma.

NOTE ON THE HYSTERICAL CONCOMITANTS OF ORGANIC NERVOUS DISEASE.*

By C. H. HUGHES, M. D.,
ST. LOUIS, MO.

The conclusion, "Some hysteria, *ergo* all hysteria," is a clinical conclusion which has proven in numberless instances fatal to correct diagnosis and to the welfare of many patients.

This neurosis may be latent as any other inherent tendency to neuropathic instability may be and often is, until some physical or pathological cause calls it into morbid activity. While hysteria is essentially an imitative and functional disturbance of the psychomotor, sensory and ganglionic centres, it is no more unreasonable to expect its development in conjunction with grave organic lesions of the cord or brain, than to anticipate pain or spasm from profound central disease or even from multiple neuritis of the motor nerves extending to the cord centers or involving contiguous peripheral sensory nerve fibers.

The time has fully come, in the progress of neural pathology and clinical neurology, to recognize this fact and realize its true significance in our clinical judgments, for without such proper recognition we may be too often led astray in diagnosis and prognosis for our patient's welfare or our professional reputations before a scrutinizing and discerning public. Hysterical patients are prone to develop peculiar inherent neuropathic characteristics of their organism under physical as well as psychical stress and this physical strain may be a real central or peripheral structural disease.

It has been quite a number of years since the writer first began to think in this way and ample observation has confirmed the correctness of his earlier judgments, though not until after some serious clinical errors had been recognized after the issue had been determined post-mortem.

So far back as 1867, 1868, 1869, 1880 and 1881, several of my autopsies at the Fulton Asylum for the Insane on patients who had died of organic disease of the brain and other organs, some of whom had been pronounced only hysterical in the communities from which they came and one or two of whom had hysterical seizures while they lived in the institution, set the author to thinking on this subject and led to a final revision of his previously entertained view that hysteria was always a functional nerve trouble.

It was not long after leaving the asylum that a very markedly instructive case, because of its tragic ending, fell under our observation.

The case was that of a lady past the menopause, and mother of several grown children, who suffered from disseminated sclerosis, with characteristic pupillary changes, intention tremors and insomnia, and with numerous hysterical symptoms and frequent paroxysms.

Her case had been pronounced by old and experienced physicians to be hysteria and hypochondria (which latter, by the way, is another much misapplied term because it, too, does really, though less frequently, co-exist with grave physical lesion).

A multiple neuritis co-existed in this case and she had exacerbations of neuralgic pains.

This woman really suffered physical agony, but the verdict of her family physician and a consultant from the city that the case was hysteria, lost her the sympathy of her husband and children which she deserved and craved, and in her despair, chagrin and grief she took her life.

Thos. Buzzard, in his presidential address before the London Neurological Society in January, 1890, has caught a glimpse of our subject in a little different light. The essay as since published by Churchill, of London, is entitled, "The Simulation of Hysteria by Organic Disease

*Read before the Neurological Section of the American Medical Association.

of the Nervous System." In this little brochure the fact has not escaped this able clinician's observation that hysterical symptoms may co-exist with even so grave an organic disease as disseminated sclerosis, but he thinks it is the sclerosis which causes symptoms which simulate hysteria, whereas we think the hysteria is real and the sclerosis is the *casus mali* that brings into prominent morbid activity the latent functional neurosis.

He even makes certain hysterical symptoms a necessary part of the organic disease he is discussing. We quote: "It appears to me reasonable to conclude that many symptoms which have come to be considered characteristic of hysteria will, if examined in the light of improved knowledge and experience, be regulated to disseminated sclerosis. The figure of hysteria shrinks in proportion as the various forms of organic disease acquire greater solidity and sharper definition."

But we have not always found this to be strictly true except as the fatal ending of disease approaches. We have in view one instance in a male which though death is impending from probable syphilitic and gummata with cerebral congestion, the patient has numerous crying spells with spitting out of food and medicine and violent tendencies at times followed by laughter and tranquility. The congestion of brain has evidently a malarial complication with cold stage, fever and sweating, reaction and intervening better days.

Buzzard's book is good reading *a propos* of our subject and bearing in mind the difference of view, viz., that in our opinion the hysterical symptoms are always brought to the surface in persons who have this neuropathic diathesis and in no others by the irritation of an organic disease, while Buzzard regards the hysterical symptoms as necessary signs of the organic disease. He has found hysterical symptoms in Frederich's ataxia and secondary cancer. We have one of the latter cases now under treatment or rather as a sequence to a second removal, the patient having, also, been really insane with delusions of electricity, etc., and periodicity of exacerbation as of malarial poisoning.

He details a case of hysterical paraplegia dependent on atrophy of the illio-psoas muscle and a number of cases of disseminated sclerosis mistakenly diagnosed as hysterical, one of them in a male patient and one case like our own terminating fatally.

We remember to have seen one case of posterior sclerosis in a female in which the pharyngo-laryngeal crises were so distinctly intermittent and the sensation of globus was so like that of hysteria that we were often uncertain as to whether the patient did not really have the true globus hystericus from the irritation of the changes in the pons and medulla and the reflected gastric crisis. She had other hysterical symptoms and had in her earlier life been a victim of this neurosis spasmodic. She died however in a cardio-laryngeal crisis.

In the recent publication of the Salpetriere Cliniques,* Volume I, 1892, Charcot relates a case of Morvan's disease complicated with hysteria and several cases of hysterical tremblings having associated variations of intention tremor and vibratory tremor. These were probably, as they were apparently, associated with sclerosis.

Five days ago a lady now dead of cerebral congestion, came to my office at the instance of Dr. Mayger of this city with general hysterical trembling. Her history had been one of mental shock and over nerve strain.

I have seen a case of abscess of the cerebrum following a cerebritis preceded by hysterical symptoms till near the close, and a school teacher of twenty-two years overworked and anxious about her ability to continue teaching developed hysteria along with general neurasthenia and malarial poisoning, the latter ending in cerebral congestion, temporary insanity and death—the hysterical symptoms disappearing as the gravity of the cerebral increased.

Hysteria sometimes displays itself in connection with epilepsia mitior as well as in the grave form of hystero-epilepsia. It has been developed in my observation after diphtheria, scarlatina and rheumatism. In these instances I have always found a family history of this or other form of spasmodic neurosis. It is not uncommon

*Clinique des Maladies du Systeme Nerveux, M. le Professeur Charcot pendant les annees 1889-90 et 1890-91 sous la direction de Georges Guinon Chef de Clinique. Publications du Progres Medical.

"Relation d'un cas type de maladie de Morvan compliqué d'hysterie. Superposition des anesthesies hysteriques et de Morvan chez le meme individu."

in ordinary chorea especially later in life after an earlier chorea, one of my present cases of chorea major shows hysteria markedly. But these are both ordinary functional nervous diseases.

I think I have seen it in one instance brought out during the convalescence from hemiplegia as chorea sometimes appears.

With these clinical facts before us, are we not justified in extending our search for hitherto unsuspected organic disease of the nervous system as causes of hysterical symptoms, as well as in looking to the womb for the fountain source of this symptomatic neurosis and in relegating to the back-ground the prevailing clinical dictum that, "Where hysterical symptoms present, the trouble is only a functional one of the nervous system?"

It is undoubtedly true, as Buzzard has clearly shown, that hysterical symptoms develop *de novo* only in part and as part of the expression of organic nervous disease. I have seen such cases—cases where the mind was for quite awhile in doubt as to the real nature of the disease—whether organic or functional. As one may see paralysis appear and find the cincture feeling present and the knee jerks absent in hysteria sometimes, so may he see symptoms of hysteria in real organic disease. I may note here a case of salam tremor or rhythmical contractions of the sterno-mastoids, long suspected by myself to have been hyterical, which proved to have been caused by cervical pachymeningitis of which the patient subsequently died.

As this is but a note of clinical warning we trust this word may prove sufficient to the wise clinician and with a brief quotation slightly qualified to compass our own view we close this paper as Buzzard has introduced his able address, our object being, "to draw attention to the frequency with which symptoms liable to be looked upon as (solely) hysterical are found to be really due to structural changes in the nervous system" as the exciting if not solely causative factor.

ANTIDOTE TO PHOSPHORUS.

In cases of poisoning by phosphorus Bokai and Korányi recommended a 1-5 to 1-3 per cent. solution of potassium permanganate. Brought in contact with this, the phosphorus is transformed into harmless orthophosphoric acid.

Correspondence.

LETTER FROM A SPECIAL CORRESPONDENT.

LONDON HOSPITALS AND WANT OF FUNDS.

I find that London suffers from the same difficulties that we do in Philadelphia, in spite of all its wealth; namely the want of funds to sustain the hospitals. The various appeals which have been made by means of friends and the press, with concerts, flower-shows and all the ordinary measures to obtain sufficient means for sustaining them, have failed, and more recently they have adopted the Hospital Sunday Collection for which there was on the tenth day of June an appeal made by the various clergymen to their congregations for funds, yet, according to the *London Times*, the Hospital Sunday has not become the entire success which it promised to be in the beginning.

It is stated that apparently, some people imagine that by giving on that day, they free themselves from the necessity of extending further assistance to the associated physicians and surgeons.

Each Hospital should receive a certain amount 'per capita,' or patient when they have been treated as an in-patient, and for out-door relief there should be a small sum paid by each patient for medicine, which, if judiciously employed, will almost entirely defray the expenses attending upon this class of cases.

SALARIED RESIDENT HOSPITAL PHYSICIANS.

Another subject has recently been discussed by the medical press of England, namely, salaried hospital physicianship, owing to the difficulty of obtaining the services of a resident honorary physician. This is especially the case in agricultural districts, but it holds good in small hospitals in cities, especially in poor neighborhoods. It has been noticed that since the appointment of a salaried physician the income of the hospital (more especially at Colchester) has steadily increased and more than pays the thousand dollars salary.

The following statistics show the fluctuations in the hospital income and work for two years preceding, and the four years succeeding, the change:

	Hospital Patients, Collections.	Hospital Sunday Collections.	Annual Subscriptions	Out-patients' Fees, i. e. per Letters.*	Total Income of Hospital.	Number of In-patients admitted.	Number of Out-patients treated.
	£	£	£	s. d.	£		
1886	403	416	918	41 7	2768	581	1585
1887	491	409	833	55 19	2748	503	1418
1888	557	406	908	50 4	2 .7	554	1736
1889	568	414	905	62 13	2968	633	1967
1890	663	481	919	72 1	3080	585	1614
1891	693	457	896	56 2	3179	697	1992
†Increase since change	302	49	14	21 0	431	184	574

—*The Provincial Medical Journal, May 2d, 1892.*

EARNINGS OF DOCTORS IN ENGLAND.

Mr. Goschen, Chancellor of the Exchequer in 1892, drew a very roseate picture of the earnings of professional men, lawyers and doctors, in England, when he compared the income derived from them with what he received with cotton spinners. Some of the lay papers have already drawn attention to the fallacy contained in his budget speech. As regards medicine we need only say that it has been repeatedly proved that the income of the medical men does not exceed 200 pounds sterling, or $1000, a year, and out of this must be paid rent, taxes, rates, the expense of the household, of horse, carriage and groom, and all other items incidental to existence.

The money in each locality is returned to the butcher, baker, tailor and when the practitioner enjoys a larger income, he makes a much larger return to the community amongst which he lives in the increased style in which he lives.

An income of $1000 a year, presuming that a medical man is married and has children, does not allow of extravagance in living.

The moiety of income tax due upon that sum becomes a very great tax for the practitioner, and is one which he cannot well afford to pay.

LAWRENCE TURNBULL, M. D.

London, England, June 12th, 1892.

* One shilling is paid by each out-patient, on admission, the latter lasting three months.

† The total increase, therefore, from the four first-named sources, is £879, so that, after paying the physician's salary a sum of about £20 comes into the general hospital funds from these sources.

Selected Formulæ.

THE TREATMENT OF TAPE-WORM BY THE EXTRACT OF MALE FERN.

The administration of male fern in the treatment of tape-worm is reviewed in the *Province Medicale*, No. 4, 1892, *Journal de Médecine de Paris*, May 1, 1892, as follows:—

1. Crequy's prescription:

℞ Extract of male fern.....8.00 grammes.
Calomel.....0.50 gramme.
M. and put into eight capsules. Sig.—Two capsules every ten minutes.

2. Peschier's formula:

℞ Extract of male fern.....2.50 grammes.
Gum arabic.....1.25 grammes.
Powder of tin.....1.25 grammes.
Calomel.....0.60 gramme.
Medicinal soap.....0.60 gramme.
Powder of fern root.....q. s.
M. and make twenty pills. Sig.—Ten pills at ten o'clock at night, and the other ten an half hour afterwards.

3. Madame Nuffer's formula:

℞ Powder of male fern.....6.00 grammes.
Water.....125.00 grammes.
M. Sig.—To be taken at once in the morning, before breakfast, to be followed one hour afterwards by a purgative, such as calomel or scammony.

4. For children:

℞ Ethereal oil of male fern.....0.50 to 1.00 gramme.
Calomel.....0.50 gramme.
Water.....15.00 grammes.
Powdered sugar.....15.00 grammes.
Gelatine.....q. s.
M.

—*Jour. de Médecine de Paris*, May 1, 1892.

FOR CONSTIPATION.

℞ Aloin.....1¼ centigrammes.
Extract of belladonna.....6 milligrammes.
Ipecacuanha.....3 centigrammes.
Strychnine.....1 milligramme.
M. and make one pill. Sig.—Night and morning

—*Jour. de Médecine de Paris*, May 1, 1892.

IN CHLOROTIC DYSMENORRHŒA.

The following combination is recommended by Monin (*Jour. de Médecine de Paris*, May 1, 1892):

℞ Tincture of balm-mint.
Tincture of saffron.
Tincture of iodine, of each.....15 grammes.
M. Sig.—Twelve drops before the principal meals. Every eighth day a warm bath, to which 12½ grammes of chlorhydrate of ammonium should be added.

ANALGESIC MIXTURE.

As an analgesic combination the following is recommended (*Jour. de Médecine de Paris*, May 8, 1892):

℞ Menthol.
Chloral.
Camphor, of each.....10.00 grammes.
M. until liquefaction takes place. Sig.—Apply locally in toothache, rheumatism and neuralgia.

THE THERAPEUTIC USES OF CHLORHYDRATE OF AMMONIUM.

In reviewing the therapeutic uses of chlorhydrate of ammonium, Ch. Liegeois (*Rev. Gener. de Cliniq. et de Therapeutique*, April 30, 1892) recommends the following formulæ:

1. In convalescence of *typhoid fever*:

℞ Syrup of marshmallow.....250.00 grammes.
Syrup of squill..... 32.00 grammes.
Ammoniated gum.
Wine of antimony.
Chlorhydrate of ammonia, of each, 5.00 grammes.
M. Sig.—Several spoonfuls during the day.

2. In *Dysmenorrhœa*:

℞ Chlorhydrate of ammonia.....200.00 grammes.
Water..... 6.00 grammes.
M. Sig.—A dessertspoonful, night and morning, before the arrival of the period.

3. In chronic *pelvic peritonitis*:

℞ Chlorhydrate of ammonium....., 50 grammes.
Simple syrup.....500 grammes.
M. Sig.—One to five dessertspoonfuls a day, taken at meal time, in a little water.

4. As an *antiperiodic*:

℞ Powder of red cinchona bark.
Chlorhydrate of ammonia, of each, 4.00 grammes.
Syrup of pulsatilla..... q. s.
M. Sig.—One half to be taken immediately after the access, the other half six hours before.

THE TREATMENT OF PRURITUS.

The following combinations are recommended in the treatment of the different forms of pruritus (*Jour. de Médecine de Paris*, May 8, 1892):—

1. Doyon's lotion:

℞ Oil of almond.....500.00 grammes.
Corrosive sublimate..... 0.50 gramme.
Chloride of ammonium..... 0.25 gramme.
M.

2. Vidal's lotion:

℞ Rose water.....250.00 grammes.
Hydrate of chloral..... 5.00 grammes.
M. Sig.—After the lotion, some starch is applied.

3. Hardy's ointment:

℞ Vaseline.....30.00 grammes.
Cyanide of potassium..... 0.10 gramme.
M.

4. Besnier's ointment:

℞ Vaseline.....30.00 grammes.
Cocaine..... 0.20 gramme.
M.

5. In pruritus of pregnancy:

℞ Warm peppermint water.....1 glassful.
Borax.....4.00 grammes.
Essence of almonds.....5 drops.
M. Sig.—Apply with a soft sponge.

6. In eczematous vulvar pruritus:

℞ Olive oil.....30.00 grammes.
Ichthyol..... 0.50 gramme.
M. Sig.—Locally applied.

7. Percy's formula:

℞ Phenic acid..... 1.50 grammes.
Tincture of opium..... 15.00 grammes.
Hydrocyanic acid..... 7.50 grammes.
Glycerine..... 15.00 grammes.
Distilled water.....120.00 grammes.
M.

8. P. Menier's formula:

℞ Pulverized talc.....15.00 grammes.
Bichloride of mercury..... 0.50 grammes.
Dried extract of valerian ..... 2.00 grammes.
M. Sig.—Apply twice or three times a day.

RESECTION OF THE OS CALCIS AND ASTRAGALUS.

Dr. Bogdanik describes the following procedure: The operator stands on the right side of the patient, and makes an incision beginning closely beneath the external malleolus, if the operation is performed on the left foot, but beneath the internal malleolus if on the right. The incision penetrates to the calcaneum and extends obliquely downwards and backwards, in the direction of the annular ligament and at a distance of one centimetre from the sole of the foot, toward the other malleolus. The calcaneus is sawed through in the same direction, while the foot is pressed by an assistant against the leg. As soon as the bone has been divided the foot can be readily folded back, so that the dorsum is in contact with the anterior surface of the leg, permitting an inspection of the ankle joint. The astragalus can now be grasped with bone forceps and removed with knife and scissors. It is of advantage to prolong the incision over both malleoli in the direction of the tendo Achilles, because this enabled us to draw upward the upper portion of the calcaneus. It is further advisable to retract the arteries and tendon with blunt hooks so as to prevent their injury by the knife. If the calcaneus is diseased the affected portion may be chiselled out, curetted, or, if necessary, the entire bone may be removed. After the removal of the astragalus the articular surface of the tibia and fibula can be readily brought into view.

The author has performed this operation on two patients and claims for it the following advantages:

1. The incision in the soft parts is small.
2. Injury of the vessels, tendons, muscles or nerves is avoided.
3. The situation of the scar is favorable.
4. Configuration of the foot is preserved.

—*Centralbl. f. Chirurgie*, No. 3, 1893.

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Leading Articles.

THE THERAPY OF ABORTION.

There is considerable difference of opinion upon many points regarding the therapy in cases of abortion where part or all the fœtal matter is retained within the uterus. While Winckel and other authorities both in this country and abroad suggest in such cases in which there is no fever, putrid discharge or hæmorrhage an expectant treatment, on the other hand Schroeder, Olshausen, Fritch, Veit and many others lay great stress upon the necessity of the immediate removal of the ovum and decidua. An important paper on this subject has appeared from the pen of Dr. Kuppenheim in the *Deutsche med. Wochenschrift.* He reports the results obtained and the therapy used in 84 cases of abortion treated in the Women's Clinic of Heidelberg, and his article has been discussed editorially in a recent issue of the *Medicinische Neuigkeiten.*

The course of seven cases out of these eighty-four cannot properly be taken into consideration, as only a single rise of temperature to 38° and 39° C. characterized an unusual condition of the patients. In seven other cases the patients when they came for treatment already had high fever, and were severely ill in consequence of the delay of proper treatment; one, indeed dying from sepsis. In these eighty-four cases digital removal of the ovum and decidua was practiced thirty-two times, and the curette was used in fifty-two cases. Three out of the first group and four out of the second succumbed.

Prior to the digital removal, the vagina, cervical canal, and if possible the uterus, should be syringed or washed out with a proper antiseptic solution such as a three per cent. carbolic acid solution or a 0.25 per cent. solution of bichloride or mercury, and a similar washing should be pursued after the operation.

The curette was used in cases of retained ovum in the second and third months of pregnancy, and only in the later months when after the digital removal of the ovum a retention of a portion of the decidua was suspected. The curette was always used with the patient in the Sim's position, after careful disinfection of the parts, and without anæsthesia. Recumier's curette was generally employed. The remnants of the decidua are scraped away with the curette in closely-lying parallel lines, care being taken not to injure the entrances of the tubes. Especially during the first three months of pregnancy, when the narrowness of the cervix precluded the possibility of digital removal without dilatation of the cervix, the operation of curetting is pre-eminently adapted for this purpose. In many cases, even after the digital operation has been successfully carried out, the curette will bring away shreds of membrane, and it is very often these that cause the most severe hæmorrhages. As a most important advantage of the curette, Kupperheim speaks of the fact that for its use the cervix need not be dilated. Another advantage is that its use causes but very little pain, so that the operation can safely be undertaken without anæsthesia. Kuppenheim is of the opinion that the danger of perforating the uterus by the curette is decidedly exaggerated by the majority of gynæcologists.

Regarding the other therapeutic means employed, we must mention that of cauterization with a ninety-five per cent. solution of carbolic acid. This was used by Kuppenheim in all cases that came to the clinic in a state of infection. The carbolic acid is applied by a sound with a pledget of cotton wrapped on the end, or with a piece of cotton held in a polypus forceps. The results of this treatment were, that in six cases the fever fell at once, and in one case a pelvo-peritonitis ceased. The cauterization with carbolic acid has other advantages, it stimulates uterine contractions and acts beneficially in checking existing endometritis.

For the checking of hæmorrhage consecutive to abortion, Dührssen's application of chloride of iron has long occupied a position of prominence; the iodoform gauze tampon will, however, usually be found of greater service.

The after-treatment consists besides a confinement to the bed for eight days, in vaginal douches and the administration of ergot.

Briefly summed up, Kuppenheim's belief is that during the first three months of pregnancy the fœtal remains should be removed manually and with the curette; that in the later months the manual method alone may often prove efficient in itself, and that the placenta should always be removed manually, but fragments of the same can only successfully be removed with the curette.

APPLICATIONS OF COLD IN TRAUMATIC SURGERY.

"It is to be regretted," says Dr. Buch, in a recent number of the *St. Petersburger med. Wochenschrift*, "that while we are fully aware of the valuable properties of cold applications in allaying pain and inflammation, yet we believe ourselves unable to apply it in the very instance where it would prove most useful." Dr. Buch refers to those cases in which the affected parts are covered with an antiseptic dressing or plaster of Paris bandage, and in which the local dressings hinder a direct cooling of the part.

According to Buch's experiences the procedure suggested some time ago by Winternitz is far too little known, and even to a less extent adopted. It consists in a method of cooling the affected limb without necessitating the removal of either dressing or plaster of Paris bandage, and is especially applicable when the injury is in the lower half of the extremity.

Winternitz's experiments have conclu-

sively demonstrated that if the upper part of an extremity be surrounded with ice, the blood-vessels of the entire limb contract. Winternitz explains this effect by a direct action on the vessels, and upon the nerve branches. Buch, however, ascribes the result to a reflex action, for it frequently suffices to place a single piece of ice upon any portion of the upper part of the arm to affect the temperature of the entire arm several degrees.

Winternitz did not fail to recognize the practical value of his discovery and invariably used ice applications as described in connection with the local dressings, and found that by so doing he was able to completely check the inflammation in the parts. The method has not, however, received the attention it deserves. Buch has, where possible, used the central applications of cold in connection with the local, and has obtained, thereby, far more gratifying results than when only local applications were employed. But in other cases, as has been mentioned, where a permanent or fixed bandage precludes the direct use of cold, the application above the dressing then of course is the only one feasible. Buch has obtained the most brilliant results for the past few years in this way. Since he adopted it he has been able to keep iodoform dressings in their place which otherwise on account of the pain they produced would have had to be removed. As soon as the wound began to be painful, Buch would apply a cold pack, or if possible an ice-pack, above the dressing, and found that invariably within a short time the pain would cease, and discovered that by this means he could guide the reaction of the wound at will.

The same holds good for fractures of the extremities. Buch is positive that in many cases the plaster of Paris splint was well-endured solely on account of the presence of the cold above the wound. During the preparation of the splint he applied extremely cold applications to the entire limb in order to reduce the temperature of the parts as much as possible, and as soon as the bandage has been applied, continues these applications above the bandage. In any case, as soon as the plaster splint causes pain, he applies an ice-pack above the splint, whereby he has always been able to control the pain and, in connection with an elevated position of the limb, also prevent the dangerous swelling so often seen.

Buch also lays stress upon the technique of this method, and agrees with Winternitz that *wet* cold is much more efficient than dry cold. Therefore, if the ice-bag is used it should not be placed dry upon the skin, but laid upon a wet compress.

It does seem strange that a method so simple and efficient should not have had the universal adoption it deserves. The use of cold in surgery and medicine will unquestionably be one of the important therapeutic measures of the future.

ON NYSTAGMUS IN AFFECTIONS OF THE EAR.

Dr. Michael Cohn has observed four cases of nystagmus occurring during the course of aural diseases. In Case *I*, of purulent otitis media, the nystagmus was easily produced by the external or internal douche, or even by slight pressure on the tragus of the diseased ear. If a plug of cotton was inserted, pressure on the tragus did not produce the nystagmus, which was horizontal in character and accompanied by vertigo. The purulent discharge soon ceased, but the nystagmus kept on. After electrical treatment it soon disappeared, although the discharge reappeared. In Case *II*, the nystagmus and vertigo were produced by injection of warm solutions. Vertigo also appeared on hearing music. In Cases *III* and *IV* it was caused by the injections of cool solutions. After a discussion of the various theories proposed, the author reaches the conclusion that attacks are most probably caused by an irritation of the semi-circular canals, rather than by a direct irritation of the brain.—*Berlin Klin. Wochensch.*, No 43, 1891.

Book Reviews.

PRACTICAL MIDWIFERY. A Hand-book of Treatment. By Edward Reynolds. Fellow of the American Gynæcological Society, of the Obstetric Society of Boston, etc. Assistant in in Obstetrics in Harvard University, etc., etc., 8vo, 424 pp., 121 illustrations. New York: Wm. Wood & Co. Price, $2.50.

Few men are better qualified to compile a manual of practical midwifery than the author of this well-written treatise upon the management of labor and the after-treatment of the woman; for he has brought to the task the learning of a large experience and the capacity to well-express his thoughts.

The author does not intend the work to be anything more than a practical manual of the practice of midwifery, wholly in accord with our latest ideas on the subject.

The arrangement of the volume is largely a natural one in dealing with obstetrical medicine, the parts of the book being arranged as follows: pregnancy, normal labor, obstetrical surgery, abnormal labor, the pathology of labor, and the puerperium. The chapters are grouped under the above headings, so that as a useful ready-reference book it will prove of much value to the busy worker. The first chapter enumerates briefly and clearly the essential facts concerned in the diagnosis of pregnancy. Following this the functional disorders of pregnancy and the care of normal pregnancy are considered, this being succeeded by a chapter on normal labor. All discussion of theoretic knowledge is rigidly avoided, and the chief usefulness of the book is in this very fact, which has resulted in the production of a manual containing simply the best and most modern ideas upon the subject of midwifery and surgical obstetrics.

The illustrations deserve mention: in general they are very good and clearly illustrate the points needing emphasis in a work of this character.

We predict for this admirable manual a most cordial reception.

CEREBRAL SCLEROSIS, OF SPECIFIC ORIGIN.

Prof. De Costa prescribed:

℞ Potassii iodidi.....gr. x.
Hydrarg. bichloridi.....gr. 1-6.
Syrup. sarsaparillæ.
Aquæ, āā ad. ℥j.—M.
Sig.—Three times a day.

Periscope.

THERAPEUTICS.

ACTION OF OZONE ON THE ORGANISM.

Observers are now agreed in regarding the effects of oxygen on the system as due to its partial transformation into ozone. MM. Labbe and Oudin have concluded a series of interesting experiments bearing upon the physiological action of the latter substance. They found that ozone increases the amount of hæmoglobin in the blood by about 1 per cent. This increase is chiefly in the case of anæmic subjects, whose blood contains only 10 or 11 per cent. of hæmoglobin; individuals having a normal proportion of the latter, 13 to 14 per cent. are unaffected by treatment by oxone.

TREATMENT OF ATHEROMATA.

Lutz (*Monatsheft. f. prak. Dermat.* No. 12., Vol. XIII, 1891.) recommends that atheromata, which have suppurated and those which are thin-walled and very adherent, should be treated by *incision*, the contents are evacuated, the cavity lightly scraped with a curette and then painted with tincture of iodine. He had wonderfully good results and found it much easier and satisfactory than the treatment by *excision*.

ANTIPYRIN IN INCONTINENCE OF URINE.

In a thesis on this subject, Dr. Gaudez has shown the good effects obtained from the use of antipyrin in cases of idiopathic incontinence of urine in children. The author reports 29 cases—14 children completely cured, 12 improved, and 3 unrelieved.

The antipyrin is given either in cachets or in solution, but in either case a small quantity of soda bicarbonate is added to each dose. The dose of antipyrin varies from 1.50 to 4.00 grammes (22 to 60 grains), according to the age of the child. These doses are given in the following way: 0.50 to 1.00 gramme (7½ to 15 grains) at 6 o'clock in the evening; a second dose at 8 o'clock, when the child goes to sleep.

M. Gaudez insists strongly on the hours at which the medicine is given. Sometimes, if the last dose is given at 8 P. M., the child may have involuntary micturi-

tion about 5 A. M.; but if the last dose is given from 9 P. M. to 11 P. M., the incontinence disappears entirely.

These good results of antipyrin have been observed very often from the first day of its use; it is not generally necessary to continue the treatment with antipyrin longer than a fortnight to obtain a permanent cure.—*Gazette des Hôpitaux*, November 17, 1891, p. 1238.

THERAPEUTIC USES OF METHYLENE BLUE.

Constantin Paul (*Sem. Méd.*, December 30th, 1891) says Desnos's experiments with methylene blue in cases of locomotor ataxy have shown that patients can without inconvenience take as much as 30 centigrammes of the drug daily, and that even when it was given in smaller doses the urine was intensely colored. C. Paul himself found that a dose of 10 centigrammes colored the urine till the third day. After a dose of 5 centigrammes the urine was still colored on the following day, and even to a slight degree on the day after. Gradually lessening the dose, he found that after 2 centigrammes the urine was distinctly colored, and had not entirely regained its normal appearance the next day. Methylene blue being absolutely harmless, C. Paul thinks its administration affords a reliable means of satisfying oneself whether patients are taking the remedies prescribed for them, which may be of practical use in prisons, lunatic asylums, etc. He further hints that the drug may also be employed by way of "suggestion" in order to convince neurotic patients of the efficacy of the treatment which they are undergoing, and as a useful *placebo* when the practitioner wishes to try the expectant method without taking the patient or his friends into his confidence.—*Brit. Med. Jour.*

ON THE EFFECTS OF CHLOROFORM.

L. E. Shaw, M. D., (*British Medical Journal*, November 21, 1891.) gives an account of some experiments made by Dr. Gaskell and himself which were in accordance with those of the Hyderabad Commission. They show that when chloroform is administered without interfering with perfectly regular respiration, complete insensibility can be produced without obvious weakening of the heart's beat. Inefficiency of the heart is brought about by the rapid inhalation of chloroform in too concentrated a form. The practical teachings are that it should be administered slowly, and with plenty of air, and that great care should be taken not to push the chloroform when struggling or gasping respiration occurs.

AN AROMATIC CASTOR OIL.

Dr. Standke (*Norsk Magazin for Lægevinenskaben*, No. 3, 1892) proposes the following manner of preparing an aromatic and well tasting castor oil:

The best oil is treated with warm water several times and saccharin added. This gives a sweet-tasting syrup, which will keep as long as the original oil. If now small quantities of oil of cinnamon and the essence of vanilla be added the last remaining traces of harshness will disappear.

PIPERAZIN.

This substance in aqueous solution dissolves twelve times as much uric acid as is dissolved by the same quantity of carbonate of lithium. There is formed a neutral urate of piperazin, which is seven times as soluble as urate of lithium. Piperazin itself and also the hydrochlorate are easily soluble in water. The dose is from fifteen to forty-five grains a day. It may be prescribed as follows:

℞ Piperazin.....gr. xv.
Aquæ destil.....f ʒi.
Syrup Aurant. cort.....ʒ v. M.
Sig.—To be taken in the course of the day. To be increased gradually.

TREATMENT OF TUBERCULOUS DISEASE OF THE KNEE.

Drobnik (*Centrab. f. Chir.*, No. 11, 1892.) advocates free exposure of the interior of the tuberculous cavity, and long-continued plugging with iodoform gauze as an efficient method of treatment in cases of tuberculosis of the knee, in which both arthrectomy and resection are contra-indicated, and no alternative remains save amputation of the limb. The author holds that in all cases of tuberculous disease amenable to surgical treatment, the seat of the disease should be freely exposed and kept open in order to enable the organism to reject the tissues already destroyed or undergoing necrosis. Free exposure of the tuberculous deposit is followed by a profuse secretion of fluid from the diseased

tissues, which drives away the necrosed parts from the immediate neighborhood of the wound, and at the same time establishes in the surrounding tissues increased vital energy, and a more energetic resistance to the attacks of the morbid agents. This discharge continues until the inner surface of the exposed cavity is lined by a thick layer of healthy granulations. In cases in which there are two or more cavities near the joint, the author would make a large opening into each. This method is indicated only in cases of osteal tuberculosis of the knee-joint, and in those in which progressive and destructive disease of the bone necessitates surgical interference. Cases of primary synovial tuberculosis, and of secondary synovial infection in consequence of the communication with the joint of one or more small osseous cavities, are best treated, after the failure of conservative measures—such as extension, rest in splints, and injections—by arthrectomy.—*British Medical Journal.*

GLYCERIN SUPPOSITORIES WITH BORIC ACID.

The use of boric acid as a laxative, when introduced into the rectum, having recently been advocated, Mr Peter Boa thought of employing the Glycerinum Boracis of the British Pharmacopœia. For the purpose of comparison he made two sets of 15-gr. suppositories, one with glycerin alone, and the other with glycerin (or as we say, glycerite) of borax. They were tried practically, and the reports (according to the *Chem. and Drugg.*) were distinctly in favor of those containing boric acid. The simple glycerin suppositories either failed to act at all or acted only very slightly, while those containing boric acid acted in some cases as efficiently as large glycerin suppositories, requiring however a longer time.

A NEW REMEDY FOR RHEUMATISM.

At a recent meeting of the Berlin Medical Society, Dr. Paul Guttman recommended a new medicament called salophen. It is a finely crystalline substance, easily soluble in ether and in alcohol, but not soluble in water. It consist of salicylic acid and acetylparamidophenol in almost equal parts. Six to eight grammes can be given daily without injury to the patient. It has a slight anti-febrile effect.—*The Lancet.*

THE RELIEF OF VOMITING.

Kenny. (*British Medical Journal*, No. 1618, p. 16) has reported the case of a parturient woman, in whom he overcame obstinate vomiting, resistant to other means of treatment, by the application of a cantharidal blister over each pneumogastric nerve at the anterior border of the sterno-mastoid muscle.

COLOMBO IN THE CONVALESCENCE OF INFLUENZA.

An anonymous correspondent of *Le Progrès Médical*, of Paris, warmly recommends the use of colombo as a tonic and sedative in the convalescence of the grippe. The writer has found it to be an incomparable preventative and curative remedy in the gastric and pulmonary forms of this disease during the last two epidemics. The powder, decoction or an elixer may be prescribed. It causes the appetite to return, the vomiting to cease, and the stools to become regular, while the convalescence is comparatively short and insignificant.

MORPHINE AND ATROPINE.

Stickler (*Centralbl. f. klin. Med.*, March 26th, 1892) says that in cases of poisoning, the antagonism of these drugs cannot be doubted, and that the want of general recognition of the fact is due to the few opportunities of observing it. The unpleasant effects of morphine used as a hypnotic may be prevented by the addition of atropine. In some cases morphine produces excitement, and if it will be still necessary to use it, atropine will antagonize this. A subcutaneous injection of morphine lessens considerably the dilatation of the pupil produced by atropine drops, and an injection of morphine and atropine combined produces only slight dilatation of the pupil. Irritation of the skin sometimes produced by morphine is prevented by atropine. The diaphoretic effects of morphine are sometimes troublesome; they do not occur if atropine be added. On the other hand, the dryness of the skin produced by atropine is remedied by morphine. One of the effects of morphine sometimes seen, and especially in those with early paralysis of the bladder, as in tabes, is retention of urine. Belladonna antagonizes it. Morphine mostly constipates; atropine has the opposite effect, especially in chronic constipation.

In biliary and renal colic the two drugs should be combined, as not only is any obstruction to the passage of the stone lessened, but the power of propelling the stone is increased. In cases of heart disease with engorged pulmonary circulation, morphine is badly borne, whereas the addition of a small quantity of atropine does away with any disadvantages.—*Brit. Med. Jour.*

POISONING BY PILOCARPINE.

A Belgian officer, with an affection of the eyes, was treated by the injection of 2 centigrammes (⅓ grain) of this drug. Immediately his neck, and then the whole of the body, became bathed with sweat; in two or three minutes he was salivated, and suffered from cardiac oppression and difficulty of breathing; he fancied his chest was full of fluid, and afterward he expectorated some frothy mucus. The cardiac oppression lasted about ten minutes, but for two hours the patient continued to have a feeling of constriction at the pit of the stomach. During this time he suffered from lachrymation, running from the nose, gastralgia, and nausea; he vomited three times, and passed his urine involuntarily. The intestinal peristalsis became violent, and he had tenesmus. His eyes were fixed, and he could not recognize any one twenty centimetres (eight inches) distant. The pulse was quick and small, the sufferer being in a condition bordering on collapse. By means of internal and external stimulants the symptoms disappeared.—*The Lancet*, February 6, 1892, p. 329.

CORONILLA.

M. V. Poulet (*Bulletin Général de Thérapeutique*, 1891, No. 46, p. 481) gives the result of his studies. The tincture of the entire plant was used in daily dosage of from one to two and a half drachms, believing that it was valuable in paroxysmal tachycardia, in the painful phenomena of certain reflex cardiopathies, in the disorders occasioned by changes at the aortic orifice; it relieves the symptoms due to lesions of the mitral valve; that it cuts short, frequently in a remarkable manner, the attacks of cardiac or bronchial asthma, it increases the appetite; is a tonic so far as the alimentary canal and general system are concerned. It is superior to digitalis in that it does not have a cumulative action, is not a depressant, nor does it give rise to digestive disturbances. Its chief value seems to be in the nervous affections (erethism) of the heart, whether primary, or secondary to a general neurosis, particularly in cardiac disturbances due to excess in venery, tobacco, coffee, or alcohol.—*Amr. Jour. Med. Sci.*

NERVOUS SYMPTOMS FOLLOWING THE USE OF QUININE.

Dr. A. Erlenmeyer reports (*Centralbl. f. Nervenheilk*), a case of poisoning by quinine which seems to be of some interest. Previous to this writing the author had observed abolition of the reflexes in several patients who were taking large doses of quinine, but in the case under consideration the symptoms were of an intense reflex irritability. The patient, aged forty-two years, had taken at one dose 1,0 of the drug, on the following day 2,0, in broken doses, examination of the patellar reflex at this time, by tapping and so forth, brought on a series of general convulsions with violent contractions of the arms and the whole body. On leaving off the medicament for twenty-four hours the nervous excitability would entirely disappear.

DIETETIC TREATMENT OF CARDIAC DISEASE.

Hirschfeld (*Berl. klin. Woch.*, March 4th, 1892) says that in the corpulent the diminution of fat, along with diminished weight, is accompanied by a considerable loss in albumins. All cures for obesity consist in diminished nutrition. In spite of this, certain organs gain in working power, as is also illustrated by the hypertrophied sterno-mastoid muscles in phthisis. In ordinary people, as in the corpulent, the heart muscle under such conditions maintains, or even increases, its working power. In diminished nutrition the total amount of blood is lessened. On the other hand, by the absorption of dissolved food stuffs into the circulation more fluid has to be driven by the heart. Again, when food is taken there is an increased consumption of oxygen by the glands, etc., and therefore more blood has to be sent to the organs in question. Thus, with a lessened supply of food, the amount of work to be done by the heart is

diminished, and at the same time its working power is not affected. If a valvular defect arise after rheumatism the reserve power of the heart is called upon before compensation is established: A limitation of diet is here certainly correct. It is more difficult to decide upon the value of this limitation in disturbance of compensation. The undoubted value of the milk cure is in the author's opinion due to limited supply of food. Touching upon the subject of strengthening the heart by muscular activity, Hirschfeld points out that the latter should be increased but gradually, and that the Marienbad cure as usually practiced requires of the heart too great exertion in too short a time. This over-exertion may predispose to dilatation. —*Brit Med. Jour.*

SALICYLATED COLLODION FOR THE ITCH

This has been found exceedingly satisfactory, according to a report of A. S. Rauschenberg in the *Pharmaceutical Record*. The treatment in seven cases consisted in first ordering a hot alkaline bath, to remove all grease from the skin, and then to apply to each spot where the disease showed itself a coating of the N. F. salicylated collodion, i. e., the ordinary corn cure. Each night the patient was examined for new spots, which were carefully painted as well as all those places in which the covering had become injured. The cure is completed within ten days. The advantages of this treatment are: immediate cessation of pain (the first application causes transient smarting), simplicity and cleanliness.

CEREBELLAR TUMOR.

Dr. Howard publishes in the *Australian Medical Journal* the case of a patient who had been under his care suffering from cerebellar tumor. The patient was a woman of forty, who for six months before her confinement in December had suffered from headache, giddiness, and unsteadiness in walking. Her symptoms became aggravated after her confinement; she staggered in walking, being inclined to fall to the left side. She had severe headache, worse in the occipital region to to the right of the middle line. There was no actual paralysis, her knee-jerks were normal, and there was no change in the optic discs and fundi except some venous engorgement. Death took place suddenly, and at the necropsy a round tumor was found arising from the back of the inferior vermiform process of the cerebellum, and growing forward so as to fill all the front part of the fourth ventricle. The tumor was an inch and three-quarters long and an inch and a half broad, and in structure was a mixture of glioma and sarcoma.—*Lancet.*

NUCLEO-ALBUMINE IN THE URINE.

Dr. Obermayer, in a lecture given before the "Gesellschaft der Aertze," reviewed the different forms of albumin, among which mucus was formerly designated, generally as an albuminate. According to its reaction and behavior with acetic acid, it has been more recently classed as an uncrystalline body allied to the proteids, forming a group which is easily precipitated by acetic acid, whose members are mucine, nucleine, nucleo-albumine, etc. Mucine and nucleo-albumine have been frequently found in the urine, but nuclein is invariably absent. Obermayer asked himself if the presence of nucleo-albumine was the result of morbid changes in the kidneys. With this question before his mind he had examined six cases of leukæmia in Prof. Nothnagel's clinic, and found nucleo-albumine in each case. In thirty-two cases of icterus that he examined, nucleo-albumine was present; in other diseases where the kidneys were affected or irritated by the use of irritants, such as sublimate, naphthol, pyrogallol, etc., as well as diphtheria, where it was found in a very large quantity; in scarlatinal nephritis and other acute forms of morbus Brightii, none or scarcely a trace was to be found.

In cystitis it was also found in considerable quantity. These results raised the question of a morbid origin, which Obermayer has divided into vesicular and renal nucleo-albuminuria, but leaves it questionable whether the latter is hæmatogenous or inogenous. He considers the renal nucleo-albuminuria is the result of injury to the renal epithelia, and more particularly that of the medullary, which is of clinical importance and may be found to possess diagnostic method.

THE RECENT EPIDEMIC OF INFLUENZA IN BERLIN.

Renvers (*Deutche medicinische Wochenschrift*, Dec. 17, 1891) states that the first epidemic of influenza reached its height in Berlin at the end of December, 1889. Since January, 1890, the epidemic influenza has been absent from Berlin, though there was always the temptation to call every severe catarrh influenza. During 1890 and 1891, there seemed to be a special tendency to catarrhal affections throughout the city. At the end of October, 1891, the writer observed the first typical attack of influenza again. The epidemic has developed complications in persons troubled with heart and kidney affections, and the prognosis is grave in such cases. In young children there appears to be an early appearance of heart weakness. Lung complications are very frequent. Since November 7, there were twelve cases of inflammation of the lungs, four of typical croupous pneumonia, and four or five of catarrhal pneumonia. In these there is but little dullness, usually a rapid disappearance of the fever. The sputum is tenacious and expectorated only with the greatest difficulty. He thinks that true pneumonia rarely appears, but the influenza catarrh gives a starting-point for all sorts of secondary infections of the lung alveoli. Influenza can also cause death through capillary bronchitis. There were also severe nervous complications during the epidemic. In a great part the epidemic resembles that of former years. He believes that the influenza is both infectious and contagious.—*Univ. Med. Mag.*

RETINAL BLOODVESSELS.

Dr. James Musgrove gives an account in the last number of the *Journal of Anatomy and Physiology* of a method of preparing the retinal vessels for demonstration either with the naked eye or with the lantern. His observations were carried out on the eye of the ox, but his method is equally applicable to that of other animals or of man. In the case of the ox the injection can be made quite well after the eye has been removed from the orbit. As much as possible of orbital fat and tissue should be removed with the eye-ball, and the vessels are to be cut far away. The injection is made through the ophthalmic artery with a hand syringe, and the eye should be kept in hot water for half an hour before the injection is made. When the injection is completed the eye is allowed to cool for two or three hours to allow the gelatine in the injection to set. The entire retina is then removed by cutting through the cornea and iris and removing the lens and vitreous. The retina is then found hanging down from the optic disc, and its attachment there is divided with a knife. The entire retina may thus be freed and floated out on water, and it is then spread out, with considerable trouble it is true, on glass by means of a small camel-hair pencil. The specimen is then dehydrated and clarified in oil of cloves, after which balsam dissolved in benzol is spread over it, and another thin lantern slide used as a cover glass. In this way the retinal vessels can be clearly demonstrated, and Dr. Musgrove gives a short account of their distribution, in which he found a remarkable uniformity in the different retinæ examined.—*Lancet.*

AN UNUSUAL NEUROSIS.

An interesting case of an unusual neurosis has been recorded in a foreign contemporary. The patient was a teacher, intelligent, unmarried, aged 25, with no neurotic family history. Menstruation was regular in time, but protracted in duration, and always accompanied with pain. One day her left eye was injured by a broken violin string, and as the result of this it was noticed that reading readily caused annoyance. On examination no lesion of the eye could be detected. There was considerable headache. Soon afterwards it was observed that on excitement or emotion the left half of the face flushed and became warm, and in the course of two or three seconds the left side of the face and head became the seat of profuse perspiration; the left ear became purple, and from the auditory canal there flowed an aqueous discharge. A sense of fullness was also felt in the left nostril. At the same time the right side of the face became pale, dry, and cold. If the provocation was intense, the left arm up to the elbow-joint became red, but without perspiration. The phenomena were aggravated during menstruation. Improvement took place as menstruation was regulated, and when the constipation, which was

troublesome was relieved. Iron and aloes were the means by which a cure was effected.—*Medical Press.*

FRONTAL HEADACHE AND IODIDE OF POTASH.

A heavy, dull headache, situated over the brow, and accompanied by languor, chilliness and a feeling of general discomfort, with a distaste for food, which sometimes approaches to nausea, can generally be completely removed by a two-grain dose of the potassic salt dissolved in half a wine glass of water, and this quietly sipped the whole quantity being taken in about ten minutes. In many cases the effect of these small doses has been simply wonderful. A person who, a quarter of an hour before, was feeling most miserable and refused all food, wishing only for quietness, would now take a good meal and resume his wonted cheerfulness. The rapidity with which the iodide acts in these cases constitutes its great advantage.—*Mass. Medical Journal.*

CONFUSION BETWEEN RODENT ULCER AND EPITHELIOMA.

In the meeting of the K. K. Gesellschaft der Aerzte in Vienna, November 13, 1891 (*Deutsche Mediz. Zeitung*, November 19), Adamkiewicz showed as healed a patient whom he had treated, apparently undeterred by the regrettable example set by Koch, by means of injections of a secret remedy. Four days after the injection healing began, and in about six weeks the whole surface was completely skinned over. As diseased foci were still to be found at the periphery, and as somewhat rapid skinning over of the centre of such ulcers may be attained by other means, the procedure did not meet with much commendation. But what was most striking was the want of distinction made by the speakers between "epithelioma" and "rodent ulcer." Both are epitheliomatous carcinomata, it is true; but the origin, microscopic appearances, course and prognosis of these affections are so entirely different, that the confusion of the two, or at least the want of appreciation by the leading speakers, Billroth and Kaposi, of their differences, tends to bear out Unna's statement that no new growth is so misunderstood in Germany as the ulcus rodens. The case in point was obviously a typical rodent ulcer of many years' standing attacking the neighborhood of the eye and spreading on to the lids. Kaposi had himself treated the case for years at intervals, whenever the patient would present himself, but he made no reference in his remarks to an ulcus rodens, and spoke only of hautkrebs and epitheliomata, some of which grew more quickly and deeply than others. Billroth spoke of the case as one of "flat epithelioma," "which is also distinguished because it commences in more advanced age (*im höheren alter*) as lupus senilis, or, again, as ulcus rodens."

Rodent ulcer is so common in England, and we have thus so many opportunities of observing it in all stages, that it seems to us difficult to understand why our German-speaking colleagues should continue to confuse two affections which are clinically so different as to their origin, course, duration, treatment and prognosis.

POLYURIA AND SCIATICA.

At a recent meeting of the Medical Society of the Paris Hospitals, Drs. Debove and Rémond announced certain phenomena which they had observed in their cases of sciatica. In the first case they found that polyuria was present, the amount of urine passed daily, varying from 2 to 4.25 litres.

Inquiry elicited the fact that the same thing had occurred three years before when the patient had suffered from an attack of sciatica.

This led to further investigation and three other sciatic patients were found in whom a like condition was present. In one of these cases azoturia was found in addition to the polyuria.

Dr. Mathieu, having heard of these facts from his confrères, was led to make investigations on his own account, and he also found polyuria present in two patients suffering from sciatica.

Dr. Desnos thought he had found this condition present in other painful affections, as for example in hepatic colic.

ALBUMINOUS PERIOSTITIS.

Dr. Dzierzawski communicates to the Polish medical journal, the *Kronika Lekarska*, an article on the so-called "periostitis albuminosa" of Poncet, Terrier, and Lannelongue. He has been able to find, in addition to his one case, twenty-

seven cases reported in medical literature. It is an affection of the periosteum characterized by a clear, tenacious exudation, resembling the synovial fluid or the white of egg, and it is, of course, from this circumstance that the name has been given it. Some authors, as Nicaise, Riedinger, Albert, and Duplay, look upon it as a special pathological form; while others, as Schlange, Roser, Vollert, Garrè, and Oliver, are disposed to regard it merely as a variety of purulent periostitis. Dr. Dzierzawski's own view is that it is not a disease *sui generis*, but that it is comparable to those cases of contagious osteo-myelitis where a clear fluid exudation is formed owing to a low type of inflammation, or to tubercular cases, where there are infiltrations or cold abscesses. The small number of pus corpuscles can be explained, according to Schlange, by their deficient formation owing to the weakness of the inflammation, or, according to Farrè, by supposing a secondary liquefaction of these bodies by a serous exudation. Under some conditions the periosteum may give rise to exudation containing mucus, consequently there is no need to suppose that the pus corpuscles undergo mucous degeneration, and a better name for the affection under consideration would perhaps, according to the author, be "non-purulent osteo-periostitis."—*Lancet.*

CROSS PARALYSIS.

Dr. Porter showed a brain before the Sheffield Medico Chirurgical Society, from a patient who had been under his care at the infirmary with cross paralysis. There was a small tumor on the left half of the pons the nature of which had not then been investigated. The patient, a man aged 40, was admitted with right hemiplegia and paralysis of the right side of the face, and internal strabismus of the left eye. There was never any contraction of the pupils. No anæsthesia and no affection of the fifth. The knee-jerks were exaggerated on both sides, but especially so on the right, and ankle-clonus was very marked on the right foot. The speech was slurred and laterally the tongue inclined slightly to the right on protrusion. There was a family history of both cancer and tubercle. No syphilitic history. The diagnosis was lesion of the pons. The patient died comatose seven weeks after admission, or four months from the commencement of the disease.—*Lancet*, June 20th, 1891.

ANALGESIA AND ATROPHY OF THE TESTICLES IN LOCOMOTOR ATAXY.

Bitot and Sabrazès (*Rev. de Mèd.*, November 10, 1891) give details of 37 well-marked cases of locomotor ataxy, in 10 of which the testicles were hypo-algesic (twice only on one side), in 18 absolutely analgesic (once only on one side), and in 9 healthy. The affection was more pronounced when ataxia was present, and even existed in the absence of any local loss in common sensation. Parallel with it there was increasing trouble in the genital functions. There was no constant relation between the analgesia and the disappearance of the testicular reflex. In 5 cases there was atrophy of the testicles (once, perhaps, antecedent to the nervous disease), the organs being soft and flabby. In 4 of these 5 cases syphilis was excluded. Among many other cases of nervous disease, the authors only found testicular hypo-algesia in 3 cases, and anæsthesia in 5; and in 5 out of these 8 cases there was inco-ordination of movement and absent knee-jerks, and 2 others were examples of progressive general paralysis. This affection may also be present in chronic arsenical intoxication, and rarely in male hysteria. In old people the glands are shrunken, but there is no hypo-algesia. In 2 of the cases with analgesia and atrophy of the testicles the nerves were examined. The myelin did not take the stain well with osmic acid; and, although presenting moniliform enlargements, it was not broken up. As to the cause of the analgesia the idea of a peripheral neuritis suggested itself; but the authors say that histological *technique* is not advanced enough to reveal slight lesions in the nerves, and that perhaps the pathogeny should be sought in the spinal cord.—*Brit. Med. Jour.*

A CASE OF CONGENITAL TUBERCULOSIS.

Sabourand publishes the following case of congenital tuberculosis in *Mèdecine Moderne* of 29th October, 1891:—The mother was a patient in St. Antoine obstetric wards. The apices of both lungs were dull, and signs of softening were

heard over the left apex. The child, a girl, was born on the 5th of August, and was of normal weight and size. The mother made a good recovery, and was dismissed on the 15 August. The placenta had not been examined microscopically. When five days old the infant had a conjunctivitis, more serous than purulent, which disappeared under treatment with nitrate of silver. On the ninth day it seemed ill, and though feeding well had a little diarrhœa. Next day it became cynanotic, and fine râles were heard over both lungs. No convulsions nor other symptom preceded death, which occurred on the morning of the eleventh day. The liver and spleen only were examined *post-mortem*. The liver was normal in size, weight, and color, without peri-hepatitis. It was riddled with tubercles varying in size from 1 to 2 millimetres, and equally distributed throughout its entire thickness. The spleen was small, hard, contracted, with the capsule thickened, and was studded throughout with tubercles of various sizes, some as large as 1 centimetre in diameter.

Microscopic examination of the liver shows that there is no trace of normal lobulation, the cells being agglomerated between the tubercles. Some tubercles are as large as a lobule, and the centre of the former seems to coincide with that of the latter, the vein being sometimes recognizable. The histology is similar to that observed after experimental inoculation: the blood-vessels are primarily affected, the nuclei being most abundant round the arteries. The bacteriological examination of the liver showed multitudes of bacilli, chiefly intra-cellular. The stain used was Ehrlich's anilin gentian violet, with safrinin as a contrast stain. With the spleen, Ziehl's solution with nitric acid showed the bacilli to be present in great numbers.

The mother died two months after the birth of the child. The pulmonary conditions progressed rapidly, and meningeal symptoms with coma set in before death. *Post-mortem* examination showed no evidence of tubercle in the breast or sexual organs. The lungs were permeated with tubercle, but there was no cavity.

The questions as to the date of infection of the child and the mode of invasion are the most important. The *post-mortem* appearances of the liver are similar to those seen in congenital tuberculosis of the lower animals, and may be accounted for by the fact that during intra-uterine life the blood is, one may say, filtered through the liver. The age of the child at death and the advanced nature of the lesions show the infection to have been intra-uterine. The splenic condition shows the disease to have been a blood infection.

MEDICINE.

LEUCOCYTOSIS IN PNEUMONIA.

Dr. R. von Jaksch, in the *Centralbl. fur Klin. Med.*, draws attention to the fact that the prognosis in cases of croupous pneumonia in which leucocytosis does not appear is very unfavorable. He thinks that in these instances it would be advisable to give by the mouth or hypodermically either pilocarpine, antipyrine, or nuclein, all of which, according to Horbaczewski, increase the number of white blood-corpuscles. Dr. von Jaksch is fully convinced that pilocarpine in croupous pneumonia actually increases the number of white corpuscles when a condition of leucocytosis already exists. For instance, in a patient suffering from pneumonia of the right base the number of white corpuscles was increased 62.7 per cent. an hour after the hypodermic injection of 0.005 milligramme of hydrochlorate of pilocarpine. This sudden increase was not due to the ingestion of food, as the patient during the same time was kept without nourishment.—*Lancet.*

ELONGATION OF THE LIGAMENTUM PATELLÆ AS A FACTOR IN THE PRODUCTION OF CERTAIN KNEE TROUBLES.

Dr. Newton M. Shaffer concludes as follows on this subject:

1. Elongation of the ligamentum patellæ may produce weak, painful, and apparently inflamed knee joints.

2. Many obscure knee-joint troubles, as well as impaired or difficult locomotion, may be explained by this condition.

3. Elongation of the ligamentum patellæ may produce a disability very like that produced by ligamentous union after transverse fracture of the patella.

And, finally, elongation of the ligamentum patellæ may be, and very frequently is, produced by forcibly breaking up a fibrous anchylosis of the knee-joint.—*Medical Record*, Jan. 16, 1892.

BONY DEPOSITS IN THE SKIN.

White (*Birmingham Medical Journal*, November, 1891.) relates a remarkable case of this condition, and compares it with Mr. Hutchinson's, reported in the *Medical Times*, 1890.

The patient was badly scalded in a railway accident in 1842, the skin of his legs being almost entirely destroyed. The healing process occupied five years, the bony plates making their appearance at a much later period. Their development has been going on in the last twenty years, in the calf, in front of the knee, and at one time completely encircling the leg. Removal has been sometimes necessary on account of irritative dermatitis set up.

Mr. White holds that failure of nutrition is not a sufficient, if any, explanation of the condition. "It results from the simultaneous action of the processes of deposition and incorporation, the least soluble salts of the nutritive fluid being left by a particularly sluggish current to become subject to the selective activity of the connective tissue cell."

SPONTANEOUS CURE OF DETACHED RETINA.

Marchetti (*Rif. Med.* January 16th, 1892) reports the following case: A man, aged 55, observed during November, 1890, that the vision of his left eye was becoming dim. This dimness increased very rapidly, and in four days there was left only perception of light. Examination revealed extensive detachments of the temporal and frontal portions of the retina, and of a great part of the nasal portion. The detachment fluctuated in the lower portion with the ocular movements; in the other parts it was distended in folds. Tension was reduced, vitreous transparent, and disc normal. Vision was restricted to P. L., and perception of movements of the fingers in the temporal section of the field of vision only. Vision had been previously good, but each cornea had a central leucoma, the remains of inflammation many years previously. He was treated with pilocarpin injections and iodide of potassium, and advised rest in the horizontal posture. In February, 1891, having continued the treatment till then, the eye was in the same condition, when quite suddenly, on the 16th, he regained his sight. This followed, apparently, on a sudden rotation of his head towards the right side, the patient feeling immediately, as it were, a blow on his useless eye. Directly after this he found that he could see objects distinctly and without any difficulty, and eight days after he could read small type quite easily. In June, when he again presented himself for opthalmoscopic examination, there was a light grey streak corresponding to the detachment, but no displacement whatever remained. The field of vision was nearly normal, save for colors, and the acuity nearly as good as before, having regard to the existence of the old leucomata. The author is inclined to attribute the sudden cure to a rupture of the detached portion, with escape of the subjacent fluid. —*Brit. Med. Jour.*

SURGERY.

ANTISEPTIC MIXTURES.

Dr. A. Cavazzni has recently reported his experiments with mixtures of various antiseptics in the form of powders. His first observations were made in thirty cases of venereal buboes. He regards iodoform as one of our best remedies in these cases, but it has the disadvantage of not possessing marked antiseptic properties. To overcome this deficiency he added salicylic acid, which is powerfully disinfectant, but somewhat irritant. The irritation was, however, avoided by the addition of subnitrate of bismuth which is, moreover, slightly antiseptic. Finally, to increase the stimulant effect of this preparation in cases of atonic ulcers some camphor was added. After numerous trials the following formula was adopted:

Iodoform	55 parts.
Acid Salicylic	20 "
Bismuth Subnitr	20 "
Camphor	5 "

The ingredients are well rubbed together and form a pale yellowish, somewhat mealy powder, which produces slight, but transient irritation, when applied to fresh wounds. This mixture is an excellent disinfectant and stimulant in cases of bubo. Its disadvantage is that it encourages hæmorrhage from the granulations, but this may be avoided by discontinuing it every fifth of sixth day and replacing it by iodol. In persons with delicate skin it may also produce excoriations.—*Wiener Mediz Presse.*

ON THE RELATIVE VALUE OF PERINEAL AND SUPRAPUBIC LITHOTOMY.

Dr. Wilhelm T. Lindenbaum (Jaroslavl, Russia), in the course of the last nine years, has made 70 perineal lithotomies in children under 15 years of age, with 2 deaths; and 32 in adults, with 8 deaths. Besides, during 1890 he performed 10 suprapubic lithotomies in patients aged from 8 to 52, with 1 death (the fatal case referred to, a man of 52, with pulmonary tuberculosis and fatty heart). The high operation was conducted after the following rule: 1. All instruments were sterilized; 2. Colpeurynter was introduced into the rectum; 3. The bladder was filled up with 250 Cub. Cm. of a salicylate solution; 4. Drainage was inserted (no vesical sutures being employed); 5. The patient was kept on his abdomen for from 8 to 10 first days; 6. The dressing was changed once daily. The urine began to flow through the urethra, on an average, on the 20th day, the wound soundly healing on the 30th. As far as young children are concerned, suturing the bladder is thought to be very difficult, and on the other hand, quite superfluous, since a healthy urine does not irritate the wound. The author's general corollaries are as follows: 1. Perineal lithotomy in early childhood represents a safe operation and gives excellent results. A relatively enormous percentage of deaths in old age can be explained by the coexistence of grave complications about viscera (especially kidneys). 2. Suprapubic lithotomy does not offer any important advantages over the perineal operation. The mortality remains yet very high, even in children. 3. Still, speaking generally, in the presence of stones, measuring above 2 Cm. in diameter, the high section should be preferred, but in cases of smaller calculi perineal lithotomy should be performed.—*Meditzinskoië Obozrenië*, No. 2, 1891, p. 133.

"MOOSE-PAPPE" AS A SURGICAL DRESSING.

Moose-pappe as an absorbent aseptic dressing, says Dr. C. G. Campbell, of Saddleworth, England, is not as well known as its merits deserve. Moose-pappe (sphagnum, or turf-moss) has great absorbent powers, taking up twenty-one times its original weight, and is decidedly the cheapest absorbent in market. When placed in contact with a liquid, moose-pappe seizes the liquid; its bulk becomes rapidly and enormously increased. The absorbed liquid does not lie on the surface or between the fibres (as is the case with absorbent cotton and wood-wool), but is shut up within the capillary cells of the moss. Thus, though it is full of liquid, it does not feel wet, and, though it may be full of pus, it appears clean. Where with an ordinary absorbent, daily dressings are required, the busy practitioner may safely leave his moose-pappe dressing two or even three days untouched, and will find, when he removes it, not a stink and a gush up of sealed up pus, but a clean wound and no smell.

As a dry dressing the moose-pappe of Dr. Rodolphi is, perhaps, the most convenient. It can be rapidly crumbled on thin gauze (which is then loosely folded over it). Moose-pappe (Hagedorn), prepared in this way, makes a beautiful, soft, dry dressing for amputations or large wounds. As a moist compress for ulcerating surfaces, moose-pappe (Hagedorn), lightly dipped in a boracic or other antiseptic fluid, makes an ideal dressing, whilst, as a padding for splints, particularly in cases of compound fracture, or fracture complicated with flesh-wounds, moose-pappe will be found most satisfactory.—*The Medical Chronicle*, February, 1892, p. 292 *et seq.*

A NEW AURAL RETRACTOR

Barth (*Arch. of Otol.*, xx, 1) describes a new retractor for spreading the divided soft parts during the operation of chiseling into the mastoid process. It consists of two bars, each provided with three sharp-pointed hooks; these bars are connected by two rods and a screw in such manner that when approximated the hooks form a single line. After having divided the soft parts, including the periosteum, and having separated the latter from the bone, the hooks of the retractor are applied so that the points touch the bone at the spot where we wish to continue to operate. Then they are separated; the points of the hook grasp the deeper soft parts, while the arms from which the hooks spring separate the more superficial soft parts and especially the divided integument, and push the auricle forward. When completely separated, the space included between the two arms presents a clear field for operation.

OBSTETRICS.

THE BLOOD IN PUERPERAL SEPSIS.

Ott reports from the clinic of Von Jaksch in Prague (*Prager medicinische Wochenschrift*, 1892, No. 14) a case of puerperal sepsis in which the examination of the blood afforded information of interest. The patient was probably infected by a midwife who attended her; two days after labor she had a severe chill, followed by fever. The midwife who cared for her had a felon upon the middle finger of her right hand where the skin had been broken. During the patient's illness her urine was examined and found to contain albumin and an abundance of aceton and urobilin. An examination of the blood showed 3,470,000 red to 15,320 white corpuscles, a ratio of 1 to 220. The percentage of hæmoglobin was 8⅘. An examination of the blood stained by Gram's method showed the presence of numerous cocci in groups. Septic panophthalmitis developed on both sides. An examination of the colostrum from the breast showed the presence of cocci. The patient died about two weeks after labor, and a post-mortem revealed the lesions common in puerperal pyæmia. The cocci present in the blood, and also the condition of leucocytosis which was present, render the report of the case of unusual interest.—*Amer. Jour. Med. Sc.*

PRESENTATION REPEATEDLY CHANGED BEFORE AND DURING LABOR.

Gallois (*Journ. des Sages-Femmes*, April 1st, 1892) reports the following case:—The patient was an imbecile, aged 24, who had borne a dead child four years previously. She was admitted into a lying-in hospital on August 4th, when about seven months pregnant. The pelvis was narrow, not flat. The child lay transversely in the pelvis, the right shoulder tending to present. The breech was easily brought down but the fœtus quickly returned to its faulty position. An attempt was made to keep the breech down with Pinard's Belt, Gallois intending to induce labor directly the desired presentation was made sure; but the belt chafed the skin, and the feeble-minded patient would not tolerate systematic precautions of this kind. On 12th, in the morning, labor came on. A foot could be felt through the membranes, with the breech above it not engaged. In the evening the pains were rapid, the membranes intact; the patient had been left alone for a long time lest the waters should be ruptured too soon. On examination, the face was found presenting. In the small hours the waters broke, the fœtal heart sounds became weak: two hours later the brow presented. The child was delivered asphyxiated. It recovered, and so did the mother. The deformities found on the fœtal head were very marked, and intermediate between those seen in brow and those observed in face presentations. The caput succedaneum occupied the forehead but hardly reached the eyelids. The cheeks were spared, the lips tumefied; there was right facial paralysis.—*Brit. Med. Jour.*

HEMICHOREA IN PREGNANCY.

Dr. Cameron in the "*Montreal Medical Journal*," January, 1892, writes, that, as in the non-pregnant, peripheral lesions may cause choreic movements, which subside when the irritating part is exercised; so in pregnant women peripheral irritation may be propagated from the uterus to the central organs and may keep up choreic movements till the cause of irritation is removed. This is well exemplified in the following case: An anæmic, neurotic patient, subject to hysterical fits, bearing family rapidly, with a lacerated crevix and a tender retroflexed uterus, developed chorea of the right side of the body in the month of pregnancy; in a few days the left side became involved while the right side began to improve. By appropriate mechanical treatment the retroflexion was corrected, and the chorea disappeared in little more than a week.

GYNECOLOGY.

A CASE OF PRECOCIOUS MENSTRUATION.

Jakubovitch (*Vratch*, No. 9, p. 214, 1892 *Rev. Gener. de Clin. et de Therap.*, April 20, 1892) reports the case of a girl who menstruated shortly after the age of 10 years. Her period lasts for 3 or 4 days, and the act occurs several times in the course of the year. Every menstrual period is preceded by nervous disturbances, such as headache, excitement, etc. The external genital organs are well developed;

the mammary gland are of the size of an egg, and at the time of menstruation they swell up and secrete milk. Apropos of this the author, in reviewing the literature of the subject, finds the records of only 35 cases analogous to the present one. Precocious menstruation is, therefore, rare, and adds, that the prognosis is favorable, although the hæmorrhages may give rise to the production of anæmia and chlorosis. The observer advises, if the loss of blood be considerable, the administration of hydrastis canadensis and ergot.

TREATMENT OF FIBROID TUMORS OF THE UTERUS BY INJECTION OF ERGOT.

J. Schneck (*Medical Age*, April, 1892) gives the histories of three cases of uterine fibroids treated by injections of ergot into the substance of the tumors, with satisfactory results, and states that several other cases are still under observation. The preparation of ergot used is a good fluid extract, in half drachm doses, and the instrument employed is the hypodermic syringe, with a long needle; a small aspirator having been used in a few instances. It is desirable to make the injection into the centre of the tumor as nearly as possible. No evil effects have been noticed after the treatment. In a few instances a chill, followed by moderate fever, occurred, but these symptoms disappeared after a few hours. In one case reported there was an intramural fibroid encroaching upon the cervix, and about as large as an orange, in a patient 42 years old. Profuse menorrhagia had existed for five months and ergot and other astringents by the mouth had failed to control it. Injections of half drachm doses of ergot into the tumor daily for eighteen days, and every second or third day afterward for the following month caused the bleeding to cease. Menstruation is regular but there is no inter-menstrual bleeding and the patient feels well, although there is no note as to the condition of the fibroid.

Another patient, of about the same age as the first case, had profuse menorrhagia following a miscarriage, for the control of which ergot was given by the mouth, with no success. An examination revealed the presence of a large fibroid in the right lateral wall of the uterus. By use of an aspirator needle the injections of ergot were given once a week for nearly five months. The hæmorrhage was controlled during this entire period, and at the end of this time the tumor was found to be extruded into the uterine cavity, attached to a thick pedicle, and was removed by the ecraseur. The tumor was so large that the wire could not surround it, and several portions had to be cut away first. There was but slight bleeding during its removal, probably due to the action of the ergot diminishing its vascularity. The substance of the tumor was soft and friable, and probably it would have broken down and liquefied in a short time. The third case was one of fibroid tumor in the posterior wall of the womb, which had made such traction upon the fundus as to cause inversion of that organ with procidentia. The injections were practised once a week for two months, at the end of this time the tumor began to suppurate and discharge freely. After thoroughly disinfecting the parts, the uterus was replaced and kept in position by a pessary.—*Univ. Med. Mag.*

CANCER OF VAGINA CAUSED BY PESSARY.

Meyer (*Zeitschr. f. Geburtsh.*, vol. xxii, 1891, part 1) describes the case of a woman who suffered from primary cancer of the vagina, evidently caused by the irritation of a pessary which had been worn for a year without change or cleansing. The diagnosis was confirmed by excision of the affected part and vaginal extirpation of the uterus, after which the diseased tissue could be examined under the microscope.—*Brit. Med. Jour.*

PEDIATRICS.

A REPORT OF 392 CASES OF INTUBATION, AND 139 CASES OF TRACHEOTOMY DONE AT THE BOSTON CITY HOSPITAL.

Prescott and Goldthwait (*Boston Med. and Surg. Journ.*, 1891, cxxv., 694.) give the following statistics: Three hundred and ninety-two cases of intubation and 139 cases of tracheotomy have been reported, with a mortality-rate of 79-59 per cent. in the former, 88-5 per cent. in the latter; 2,815 cases of intubation and 22,941 cases of tracheotomy have been collected and analyzed, showing comparatively no difference in the mortality-rate

of the two operations. The results depend more upon the nature of the epidemic than upon the operation. With intubation the results depend more upon the skill and experience of the operator than with tracheotomy.

Thirty-seven cases were seen at least a year and half after recovery from intubation, with perfect voice, and with nothing that would indicate any ulceration from pressure of the tube.

HYSTERIA IN CHILDREN.

Jolly (*Deutche med, Zeit.*, April 4th, 1892) states that he has seen a considerable number of cases of hysteria in children which might give rise to difficulty in diagnosis. He has frequently met with persistent localized pain with convulsive phenomena, and also with inability to use an extremity, combined sometimes with distinct paralysis and anæsthesia, especially in children who have recently had acute infectious diseases. The paraplegic form preponderates, but occasionally monoplegia and hemiplegia may be observed. He has seen hemianæsthesia after influenza. Tremor was a common symptom in cases having a traumatic origin. He mentions also laryngeal disorders, and various affections of speech and hearing; in particular, stammering and more or less prolonged loss of speech, conditions which might be cured by a brief application of the faradic current. Deafness and amblyopia might also be observed. In cases in which hysterical fits of laughing or crying are followed by convulsive movements of the extremities Jolly recommends isolation, with cold douches to the face, or a somewhat painful faradic current. He relates one severe case commencing at the age of 9, in which the girl gradually grew worse, and indulged in foul and blasphemous language; at the age of 12 the evil spirit was exorcised by a thorough purging. In other cases with severe symptoms he has found the cold pack useful, or the syringing of the face with water; for the latter purpose a siphon of aërated water may be used.—*Brit. Med. Jour.*

HYGIENE.

MILK EPIDEMIC OF TYPHOID.

Dr. F. M. Williams, medical officer of health for Plymouth, has been good enough to give us particulars of the result of his inquiry into the occurence of enteric fever in connection with the milk supply for a portion of the town. Attention was first directed by the notification of three cases of enteric fever during two days in the same neighborhood, and the discovery that the households had a common milk snpply. The dairy which furnished the milk obtained it from a farm in the Plympton district, which is non-scheduled and in which the Compulsory Notification Act isnot adopted. This farm, which contains about one hundred cows, was visited, and the persons there employed stated that neither they nor their children had, during the last few months, suffered from illness or diarrhœa. The well, the cover of which is said to be leaky, was within some forty feet of the privy cess-pit, but examination by the chemical analyst gave negative results. Two other cases were shortly afterwards reported from the same milk supply, and Dr. Williams eventually ascertained that there had been a death from enteric fever on the farm some twenty days previous to his visit, the deceased being a grandchild of the caretaker. The medical man who had attended the case confirmed the correctness of this statement, and added that there was another case of typhoid fever at that time, the patient being actually ill at the time of Dr. Williams' first visit. In conjunction with the medical officer of health for Plympton, steps were taken at once, the cows were all removed to another farm, the farm being closed as a dairy farm; the pump from the well was dismantled, the well closed, and the patient removed to hospital. Seven other cases having the same milk supply have been notified within a fortnight of the first cases not including two that have been notified since closing the farm. The total number of cases is thus twelve. One case has terminated fatally—a young man who was ordered by his medical attendant to live on a milk diet for some ailment. and who was one of the earlier cases reported.

The remainder of the cases are doing well, and it is hoped that there will be no more fatalities. It is stated that there was a severe case of enteric fever at the same farm some twelve months since, but no information as to the disposal of the excreta can be obtained, as the family had left the neighborhood. Dr. Williams is strongly of opinion, based on some years of experience of health work in rural districts, that

this is the cause of the present outbreak. As to the means of propagating the disease at the farm, he points out that the man and his wife were both engaged in the dairy work milking cows, etc., and nursing the sick child. The cesspit contained typhoid excreta, and probably polluted the well, although chemical analysis gave no proof of pollution. Two families have suffered severely, three members in one family and two in another. Several other members of this latter family suffered for a few days from diarrhœa, fever, and *malaise*. Several hotels were supplied with milk from the same farm, so that there might have been visitors who had contracted the disease at Plymouth, and not developed it until their return to their homes or elsewhere.—*Brit. Med. Jour.*

MEDICAL CHEMISTRY.

A STABLE SOLUTION OF SODIUM SALICYLATE.

Solution of sodium salicylate for ready dispensing purposes very soon darkens in color, as every one knows, being due to the alkaline nature of the solution. To obviate this trouble, M. Rucker (*Zeit. O. Apoth. Ver.*) recommends the addition of a little salicylic acid, in the proportion of, say, 1 to 1000 for the sodium salt used, so as to insure a slightly acid reaction. To prepare a stable 10-per cent by weight solution direct from the acid, it requires 100 grams of salicylic acid, 61 grams of sodium bicarbonate and 1,095 grams of distilled water, the sodium salicylate formed representing approximately 122 grams. Cold water should alone be employed and too violent a reaction be avoided, while the salicylic acid must be slightly in excess. To further insure stability, filter through absorbent cotton or glass wool.

EXTRACTS OF ANIMAL TISSUES.

Extracts of animal tissues for hypodermic purposes, an extension in therapy of Brown-Sequard's spermatic treatment, are prepared by d'Arsonval by digesting for 24 hours the glands or other parts of the animal (such as pancreas, spleen, brain, muscles, etc.) with three times the weight of glycerin, at a temperature of 28°C. To this is added three times the weight of the glycerin of recently boiled, but cooled, water. This extract, containing 25 per cent of glycerin, is filtered and sterilized by exposing for one hour to carbonic acid gas under a pressure of 50 atmospheres, at a slightly raised temperature.

NEWS AND MISCELLANY.

SYPHILIS AMONG THE ANCIENT EGYPTIANS.

Proksch (*Archives F. Dermatologie U. Syphilis*, June 20, 1891) discusses the probable existence of syphilis among the ancient Egyptians. In studying a papyrus containing instructions about the management of a disease known to them as "uxedu," he has identified syphilis. The papyrus gives the treatment for uxedu in the anus, in suppurating wounds, in the mouth, in the eyes, in the bones, in tumors of the head, in the body, in pustules, etc., thus giving an almost complete history of the various situations in which syphilis may manifest itself. The author concludes that the uxedu of the ancient Egyptians is our syphilis.

THE OWNERSHIP OF AMPUTATED LIMBS.

A singular case has recently been tried before His Honor JudgeJones in the Bolton County-court. The plaintiff, Ellis Housley, sued the junior house surgeon at the Bolton Infirmary for £10, the value of one of the arms of his son, who had been hurt at His work. The limb was amputated at the infirmary, and after the operation the patient asked for the arm, but the house surgeon refused to allow him to take it away. A day or two later the boy died, and the father again demanded his son's arm along with the body for burial. It was argued for the plaintiff that he had a right to the limb, whilst for the defendant that there was no cause of action. His Honor said the plaintiff had no property in his son or his son's body, and even a guardian was only a guardian during lifetime and not of the dead body, and there was no obligation to bury. After further argument the solicitor for the plaintiff stated that if his Honor was against him on the common law, he could go no further, and there was a verdict for the defendant, with costs.—*Lancet.*